Lampiran Peer Review Korespondensi Proses Submit Publikasi Internasional

Judul Artikel   :   Neurocomputing fundamental climate analysis

Nama Jurnal   :   TELKOMNIKA Telecommunication, Computing, Electronics and Control

Reputasi   :   Terindeks Scopus Q2 (SJR=0,28)

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[ICW-TELKOMNIKA 2018] Setting up your EDAS account password

lppi@uad.ac.id.edas.info <lppi@uad.ac.id.edas.info>   Tue, Jun 19, 2018 at 7:35 PM
Reply-To: lppi@uad.ac.id
To: Hasbi Yasin <hasbiyasin17@gmail.com>

Dear Hasbi Yasin:

An EDAS publication management account has been created for you for one of the following reasons:

- you are a co-author of a paper;
- you are a technical program committee member;
- you will be asked to review a paper;
- you will be asked to chair a session.

The account was created for ICW-TELKOMNIKA 2018 by Rezzy Eko Caraka with the information: Affiliation : Diponegoro University Country : Indonesia Your EDAS user name : hasbiyasin17@gmail.com your ID number : 1598915 your initial password can be set at

https://edas.info/te5af347bf8ab24caed9f895facb23b63

You can log in at http://edas.info/

Your EDAS account can be used for all EDAS-managed conferences and journals. You should not create a new account for each conference.

Regards,

The EDAS manager help@edas-help.com

[ICW-TELKOMNIKA 2018] Decision for paper 'Neuro Computing Fundamental Climate Analysis'

lppi@uad.ac.id.edas.info <lppi@uad.ac.id.edas.info>   Fri, Jul 13, 2018 at 1:55 PM
Reply-To: lppi@uad.ac.id
To: Rezzy Eko Caraka <rezzyekocaraka@gmail.com>, Sakhinah Abu Bakar <sakhinah@ukm.edu.my>, Muhammad Tahmid <mtahmid751@gmail.com>, Hasbi Yasin <hasbiyasin17@gmail.com>

Dear Mr. Rezzy Eko Caraka:

After careful review, the decision for your paper #1570469461 "Neuro Computing Fundamental Climate Analysis" for ICW-TELKOMNIKA 2018 is REVISIONS REQUIRED. You are asked to submit a revised full manuscript for re-review, according to the comment from reviewers. The due date for revision is Aug 1, 2018.

We would like your cooperation with the double check of your REVISED paper:
(1) TEMPLATE for preparing final camera ready paper: http://goo.gl/FiPFbF
(2) Checklist for preparing your paper for publication: http://www.journal.uad.ac.id/index.php/TELKOMNIKA/about/editorialPolicies#custom-1
(3) Please ensure the maximum page of your final paper is 8-page, but still allowed up to 12 pages (required to pay an extra fee).
(4) Most importantly, please ensure the similarity score is less than 30%. If the similarity score of revised version is more than 30%, the paper will be rejected from consideration for ICW-TELKOMNIKA 2018.

The reviews are below or can be found at https://edas.info/showPaper.php?m=1570469461, using your EDAS login name rezzyekocaraka@gmail.com.

Best Regards,
Assoc. Prof. Dr. Tole Sutikno
General Chair
Editor-in-Chief, TELKOMNIKA Telecommunication, Computing, Electronics and Control
Scopus indexed journal, SJR: 0.265, CiteScore: 0.63, SNIP: 0.580
Q3 on Electrical & Electronics Engineering

--
======= Review 1 =======

> *** Novelty and Contribution: Rate the degree of scientific contribution provided by this paper. Do the authors offer new findings? Do they give proper explanation and detailed analysis?
Good (3)

> *** Paper Presentation: What is your evaluation on the quality of presentation from this paper (e.g. figures, tables, formats, etc.)?
Excellent (4)

> *** Detailed Comments: Please provide detailed comments that will be helpful to the TPC for assessing the paper. Also provide feedback to the authors.

IN this paper authors presented a review about SST Anomalies in Manado, Northern Sulawesi and compared the performance of rainfall forecasting by using three types of neurocomputing methods. Paper is well written and organised but authors should add quantitative results in abstract and try to improve the English and grammar.

> *** Recommendation: Your overall rating.
Weak Accept (4)

[ICW-TELKOMNIKA 2018] #1570469461 has been uploaded

lppi@uad.ac.id.edas.info <lppi@uad.ac.id.edas.info>   Thu, Jul 19, 2018 at 8:36 AM
Reply-To: lppi@uad.ac.id
To: Rezzy Eko Caraka <rezzyekocaraka@gmail.com>, Sakhinah Abu Bakar <sakhinah@ukm.edu.my>, Muhammad Tahmid <mtahmid751@gmail.com>, Hasbi Yasin <hasbiyasin17@gmail.com>, Isma Kurniawan <ismadwikurniawan@gmail.com>
Cc: tole@journal.uad.ac.id

Dear Mr. Rezzy Eko Caraka:

Thank you for uploading your paper 1570469461 (*Neurocomputing Fundamental Climate Analysis*) to **1st International Conference and Workshop on Telecommunication, Computing, Electronics and Control 2018**. The paper is of type application/msword and has a length of 7981056 bytes.

You can modify your paper at https://edas.info/showPaper.php?m=1570469461 and see all your submissions at https://edas.info/index.php?c=24932 using the EDAS identifier rezzyekocaraka@gmail.com

Regards,
Assoc. Prof. Dr. Tole Sutikno
General Chair

Editor Decision - (Link for Registration) --> bit.ly/icw-telkomnika2018

lppi@uad.ac.id.edas.info <lppi@uad.ac.id.edas.info>
Reply-To: lppi@uad.ac.id
To: Hasbi Yasin <hasbiyasin17@gmail.com>

Thu, Jul 26, 2018 at 4:59 PM

```
--- International Conference and Workshop on TELKOMNIKA
--- ICW-TELKOMNIKA 2018
--- September 18-21, 2018 at ROYAL AMBARRUKMO Yogyakarta
--- Jl. Laksda Adisucipto No.81, Ambarukmo, Caturtunggal,
--- Depok, Sleman, Yogyakarta 55281, Indonesia
-------------------------------------------------------
```

Dear Prof/Dr/Mr/Mrs: Hasbi Yasin,

We have reached a decision regarding your submission number 1570469461 entitled "Neurocomputing Fundamental Climate Analysis" to International Conference and Workshop on Telecommunication Computing Electronics and Control 2018 (ICW TELKOMNIKA 2018).

Our decision is to proceed your paper. Please login to EDAS to view reviewer's comments (if required).

We invite you to present your paper in the ICW TELKOMNIKA 2018 on Sep 18-20, 2018 in Yogyakarta, Indonesia. All presented papers (after revisions based upon feedback at the conference & workshop, if necessary) will be published in the TELKOMNIKA Telecommunication Computing Electronics and Control (a Scopus indexed journal, SCImago Journal Rank (SJR) Q3) as REGULAR issue.

In preparing your final camera ready paper for conference, you should pay attention to:

1. Authors should have made substantial contributions to:
```
-----------------------------------------------------------------------
```
(a) the conception and design of the study, or acquisition of data, or analysis and interpretation of data
(b) drafting the article or revising it critically for important intellectual content

2. Introduction section
```
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```
Explain the context of the study and state the precise objective
An Introduction should contain the following three parts:
- Background: Authors have to make clear what the context is. Ideally, authors should give an idea of the state-of-the art of the field the report is about.
- The Problem: If there was no problem, there would be no reason for writing a manuscript, and definitely no reason for reading it.
So, please tell readers why they should proceed reading. Experience shows that for this part a few lines are often sufficient.
- The Proposed Solution: Now and only now! - authors may outline the contribution of the manuscript. Here authors have to make sure readers point out what are the novel aspects of authors work. Authors should place the paper in proper context by citing relevant papers. At least, 5 references (recently journal articles) are used in this section.

3. Results and Discussion
```
---------------------------------
```
The presentation of results should be simple and straightforward in style. This section reports the most important findings, including results analyses as appropriate and comparisons to other research results. This section should be supported suitable references.

4. Conclusion
```
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```
Your conclusion should make your readers glad they read your paper. Summarize sentences the primary outcomes of the study in a paragraph (NOT in numbering).

5. References and Citations

We usually expect a minimum of 25 and 40 references primarily to recent journal papers for research/original paper and review paper, respectively. Each citation should be written in the order of appearance in the text [1], [2], [3], [4], ... (Sequential order!!)
URGENT: SELF CITATION from same author or group authors is MAX 10%.

6. Paragraph

A paragraph is a sentence or group of sentences that support one main idea. Many authors have presented paragraphs in very long terms. Author should use simple sentences which are grammatically correct, but too many can make your writing less interesting.
Every paragraph in a paper should be:
- Unified: All of the sentences in a single paragraph should be related to a single controlling idea (often expressed in the topic sentence of the paragraph).
- Clear: The sentences should all refer to the central idea of the paper.
- Coherent: The sentences should be arranged in a logical manner and should follow a definite plan for development.
- Well-developed: Every idea discussed in the paragraph should be adequately explained and supported through evidence and details that work together to explain the paragraph's controlling idea.

IMPORTANT:

Please register & submit your final camera paper in MS Word file format (or LATEX source files; ZIP your files if you present your final paper in LATEX) through bit.ly/icw-telkomnika2018 (registration form) or goo.gl/q7Hjx3 (registration form) as soon.

Conference fee please refer to bit.ly/icw-poster or goo.gl/3WJWFp
Batch I (for latest papers submission: May 1, 2018)
- Early Bird deadline: Jul 30, 2018
- Registration deadline: Aug 10, 2018

Batch II (for papers submission AFTER May 1, 2018)
- Early Bird deadline: Aug 10, 2018
- Registration deadline: Aug 30, 2018

This fee covers conference, gala dinner, seminar kit, workshop & publication fees on the TELKOMNIKA, but excludes hotel room, transportation & tour.

Payment is by T/T transfer:

Bank Account name (please be exact)/Beneficiary: TOLE SUTIKNO
Bank Name: Bank Central Asia (BCA)
Branch Office: Kusumanegara
City: Yogyakarta
Country :Indonesia
Bank Account #: 8465122249
SWIFT Code: CENAIDJAXXX

I look forward for hearing from you

Thank you

Best Regards,
Assoc. Prof. Dr. Tole Sutikno
General Chair, ICW TELKOMNIKA 2018
Editor-in-Chief, TELKOMNIKA, Scimago Journal Rank (SJR): Q3
email: tole@journal.uad.ac.id

Tentative agenda of the ICW TELKOMNIKA:

--- September 18-21, 2018 at Royal Ambarrukmo Yogyakarta
--- Jl. Laksda Adisucipto No.81, Ambarukmo, Caturtunggal, Depok, Sleman

--- Yogyakarta 55281, Indonesia

* Sep 18, 2018 (08.00-21.00): International Conference-Keynote Speeches and Parallel Sessions
* Sep 19, 2018 (08.00-11.45): International Conference (cont.)
* Sep 19, 2018 (13.00-17.00): Tutorial on Humanoid Robot (Prof. Nadia Magnenat Thalmann), Virtual Reality (Prof. Daniel Thalmann) and Intelligent Autonomous Systems (Prof. Er Meng Joo)
* Sep 19, 2018 (18.00-21.30): Award Ceremony Program and Gala Dinner
* Sep 20, 2018 (08.00-16.00): Scientific Writing Workshop on TELKOMNIKA Editors and Authors Meeting (TEAM) for upgrading our papers based upon feedback at the conference.
* Sep 21, 2018: One Day Tour Yogyakarta (optional) - Tour to Yogyakarta and vicinity visiting Sultan's Palace or Kraton, Taman Sari Water Castle, Borobudur and Prambanan Temples

[ICW-TELKOMNIKA] Do registration through bit.ly/icw-telkomnika2018

lppi@uad.ac.id.edas.info <lppi@uad.ac.id.edas.info>   Sat, Aug 4, 2018 at 11:39 AM
Reply-To: lppi@uad.ac.id
To: Hasbi Yasin <hasbiyasin17@gmail.com>

Dear Mr. Hasbi Yasin:

Congratulations - your paper for ICW-TELKOMNIKA 2018 is proceed for 1st International Conference and Workshop on Telecommunication, Computing, Electronics and Control 2018 (ICW-TELKOMNIKA 2018).

We would like your cooperation with the double check of your final manuscript (CAMERA READY paper):

(1) TEMPLATE for preparing Final manuscript (CAMERA READY paper): http://goo.gl/FiPFbF

(2) Checklist for preparing your paper for publication: http://www.journal.uad.ac.id/index.php/TELKOMNIKA/about/editorialPolicies#custom-1

(3) Please ensure the maximum page of your Final manuscript (CAMERA READY paper) is 8-page, but still allowed up to 12 pages (required to pay an extra fee, USD40 per page for extra pages).

(4) All the papers have in MS Word file format (or ZIP from LATEX source files). You can upload your Final manuscript (CAMERA READY paper) version in EDAS at "FINAL MANUSCRIPT" (NOT on Review manuscript). If you reached any problems, please contact us by email: icw.telkomnika@journal.uad.ac.id, cc: tole@journal.uad.ac.id

(5) Most importantly, please ensure the SIMILARITY SCORE is less than 30%. You can refer to EDAS to see the similarity score of your paper. According to international regulations, any paper with a similarity score of more than 30% will be dropped. Please make sure your final paper follow this rule. If the similarity score of final version is more than 30%, the paper will be dropped or cancelled to be presented at ICW-TELKOMNIKA 2018 and from consideration for publication in the TELKOMNIKA.

(6) Any paper that has been "accepted" must be registered no later than August 30, 2018. The paper which is not registered will be dropped automatically.

URGENT!!!

Please register & submit your FINAL CAMERA READY paper in MS Word file format (or LATEX source files; ZIP your files if you present your final paper in LATEX) through bit.ly/icw-telkomnika2018 (registration form) or goo.gl/q7Hjx3 (registration form) as soon.

Conference fee please refer to bit.ly/icw-poster or goo.gl/3WJWFp
Batch I (for latest papers submission: May 1, 2018)
- Early Bird deadline: Jul 30, 2018
- Registration deadline: Aug 10, 2018

Batch II (for papers submission AFTER May 1, 2018)
- Early Bird deadline: Aug 10, 2018
- Registration deadline: Aug 30, 2018

(7) please do upload a presentation file no later than 30 August 2018 via EDAS on the icon "presentation".

(8) The presentation schedule will be announced in the first week of September 2018.

(9) UAD reserves the right to exclude a paper from distribution after the conference (e.g. removal from consideration for publication in the TELKOMNIKA) if the paper is not presented at the conference (excluded: overseas authors with permission from General Chair, but presentation file is mandatory).

I look forward for receiving your final camera ready paper.

Thank you for your cooperation.

M Gmail

Hasbi Yasin <hasbiyasin17@gmail.com>

[ICW-TELKOMNIKA 2018] Your paper #1570469461 ('Neurocomputing Fundamental Climate Analysis')

lppi@uad.ac.id.edas.info <lppi@uad.ac.id.edas.info>   Sat, Aug 4, 2018 at 5:51 PM
Reply-To: lppi@uad.ac.id
To: Rezzy Eko Caraka <rezzyekocaraka@gmail.com>, Sakhinah Abu Bakar <sakhinah@ukm.edu.my>, Muhammad Tahmid <mtahmid751@gmail.com>, Hasbi Yasin <hasbiyasin17@gmail.com>, Isma Dwi Kurniawan <ismadwikurniawan@gmail.com>

Dear Mr. Rezzy Eko Caraka:

Congratulations - your paper #1570469461 ('Neurocomputing Fundamental Climate Analysis') for ICW-TELKOMNIKA 2018 has been accepted for 1st International Conference and Workshop on Telecommunication, Computing, Electronics and Control 2018 (ICW-TELKOMNIKA 2018).

Please make the necessary changes based on reviewers' comments and suggestions. For your information, according to international regulations, similarity score of camera-ready paper should be less than 30%. The Technical Paper Committee will check whether the revision has been performed or not. If you fail to do so, we have a right to exclude your paper from consideration for publication in the TELKOMNIKA Telecommunication, Computing, Electronics and Control (Scopus indexed journal, SJR: 0.265, Q3 on Electrical & Electronics Engineering, CiteScore: 0.63, SNIP: 0.580).

The reviews are below or can be found at https://edas.info/showPaper.php?m=1570469461.

We would like your cooperation with the double check of your Final manuscript (CAMERA READY paper):

(1) TEMPLATE for preparing Final manuscript (CAMERA READY paper): http://goo.gl/FiPFbF

(2) Checklist for preparing your paper for publication: http://www.journal.uad.ac.id/index.php/TELKOMNIKA/about/editorialPolicies#custom-1

(3) Please ensure the maximum page of your Final manuscript (CAMERA READY paper) is 8-page, but still allowed up to 12 pages (required to pay an extra fee, USD40 per page for extra pages).

(4) All the papers have in MS Word file format (or ZIP from LATEX source files). You can upload your Final manuscript (CAMERA READY paper) version in EDAS at "FINAL MANUSCRIPT" (NOT on Review manuscript). If you reached any problems, please contact us by email: icw.telkomnika@journal.uad.ac.id, cc: tole@journal.uad.ac.id

(5) Most importantly, please ensure the SIMILARITY SCORE is less than 30%. You can refer to EDAS to see the similarity score of your paper. According to international regulations, any paper with a similarity score of more than 30% will be dropped. Please make sure your final paper follow this rule. If the similarity score of final version is more than 30%, the paper will be dropped or cancelled to be presented at ICW-TELKOMNIKA 2018 and from consideration for publication in the TELKOMNIKA.

(6) Any paper that has been "accepted" must be registered no later than August 30, 2018. The paper which is not registered will be dropped automatically.

URGENT!!!

Please register & submit your FINAL CAMERA READY paper in MS Word file format (or LATEX source files; ZIP your files if you present your final paper in LATEX) through bit.ly/icw-telkomnika2018 (registration form) or goo.gl/q7Hjx3 (registration form) as soon.

Conference fee please refer to bit.ly/icw-poster or goo.gl/3WJWFp (http://journal.uad.ac.id/index.php/TELKOMNIKA/pages/view/registration)
Batch I (for latest papers submission: May 1, 2018)
- Early Bird deadline: Jul 30, 2018
- Registration deadline: Aug 10, 2018

Batch II (for papers submission AFTER May 1, 2018)
- Early Bird deadline: Aug 10, 2018

- Registration deadline: Aug 30, 2018

(7) please do upload a presentation file no later than 30 August 2018 via EDAS on the icon "presentation".

(8) The presentation schedule will be announced in the first week of September 2018.

(9) UAD reserves the right to exclude a paper from distribution after the conference (e.g. removal from consideration for publication in the TELKOMNIKA) if the paper is not presented at the conference (excluded: overseas authors with permission from General Chair, but presentation file is mandatory).

(10) Figures & Tables: (URGENT)!!!
- Because tables and figures supplement the text, all tables and figures should be REFERENCED in the text. Authors MUST EXPLAIN what the reader should look for when using the table or figure. Focus only on the important point the reader should draw from them, and leave the details for the reader to examine on her own.
- Tables are to be presented with single horizontal line under: the table caption, the column headings and at the end of the table. All tables are produced by creating tables in MS Word. Captured tables are NOT allowed.
- All figures MUST in high quality images

I look forward for receiving your final camera ready paper.

Thank you for your cooperation.

Best Regards,
Assoc. Prof. Dr. Tole Sutikno
General Chair
Editor-in-Chief, TELKOMNIKA

======= Editor comments =======
The typical form of FFNN model is written in the following equation: ----> The typical form of FFNN model is written in (1).

Many equations and symbol in this paper are very poor (in image mode)
Re-written all equations in your paper by using equation tool in MS Word

Figure 1 is not cited in your paper??
All tables and figures should be REFERENCED in the text. Authors MUST EXPLAIN what the reader should look for when using the table or figure. Focus only on the important point the reader should draw from them, and leave the details for the reader to examine on her own.

... While the minimum amount of rainfall occurs in June-July-August (JJA). In climatological science. ???
Proofread by Native speakers are needed.
Please submit your revised paper as soon. Attach your proofreading evidence by native speaker.

======= Review 1 =======

> *** Novelty and Contribution: Rate the degree of scientific contribution provided by this paper. Do the authors offer new findings? Do they give proper explanation and detailed analysis?
Good (3)

> *** Paper Presentation: What is your evaluation on the quality of presentation from this paper (e.g. figures, tables, formats, etc.)?
Excellent (4)

> *** Detailed Comments: Please provide detailed comments that will be helpful to the TPC for assessing the paper. Also provide feedback to the authors.

IN this paper authors presented a review about SST Anomalies in Manado, Northern Sulawesi and compared the performance of rainfall forecasting by using three types of neurocomputing methods. Paper is well written and organised but authors should add quantitative results in abstract and try to improve the English and grammar.

> *** Recommendation: Your overall rating.
Weak Accept (4)

![Gmail](M Gmail)

[ICW-TELKOMNIKA 2018] #1570469461 has been uploaded

lppi@uad.ac.id.edas.info <lppi@uad.ac.id.edas.info>　　　　　　　Tue, Aug 7, 2018 at 3:42 PM
Reply-To: lppi@uad.ac.id
To: Rezzy Eko Caraka <rezzyekocaraka@gmail.com>, Sakhinah Abu Bakar <sakhinah@ukm.edu.my>, Muhammad
Tahmid <mtahmid751@gmail.com>, Hasbi Yasin <hasbiyasin17@gmail.com>, Isma Dwi Kurniawan
<ismadwikurniawan@gmail.com>
Cc: tole@journal.uad.ac.id

Dear Mr. Rezzy Eko Caraka:

Thank you for uploading your paper 1570469461 (*Neurocomputing Fundamental Climate Analysis*) to **1st
International Conference and Workshop on Telecommunication, Computing, Electronics and Control
2018**. The paper is of type application/vnd.openxmlformats-officedocument.wordprocessingml.document and has
a length of 761779 bytes.

You can modify your paper at https://edas.info/showPaper.php?m=1570469461 and see all your submissions at
https://edas.info/index.php?c=24932 using the EDAS identifier rezzyekocaraka@gmail.com

Regards,
Assoc. Prof. Dr. Tole Sutikno
General Chair

M Gmail

Hasbi Yasin <hasbiyasin17@gmail.com>

[ICW-TELKOMNIKA 2018] #1570469461 has been uploaded

lppi@uad.ac.id.edas.info <lppi@uad.ac.id.edas.info>   Thu, Aug 16, 2018 at 10:22 AM
Reply-To: lppi@uad.ac.id
To: Rezzy Eko Caraka <rezzyekocaraka@gmail.com>, Sakhinah Abu Bakar <sakhinah@ukm.edu.my>, Muhammad Tahmid <mtahmid751@gmail.com>, Hasbi Yasin <hasbiyasin17@gmail.com>, Isma Dwi Kurniawan <ismadwikurniawan@gmail.com>
Cc: tole@journal.uad.ac.id

Dear Mr. Rezzy Eko Caraka:

Thank you for uploading your paper 1570469461 (*Neurocomputing Fundamental Climate Analysis*) to **1st International Conference and Workshop on Telecommunication, Computing, Electronics and Control 2018**. The paper is of type application/vnd.openxmlformats-officedocument.wordprocessingml.document and has a length of 761928 bytes.

You can modify your paper at https://edas.info/showPaper.php?m=1570469461 and see all your submissions at https://edas.info/index.php?c=24932 using the EDAS identifier rezzyekocaraka@gmail.com

Regards,
Assoc. Prof. Dr. Tole Sutikno
General Chair

Fwd: [ICW-TELKOMNIKA 2018]: Preparing final camera ready paper for publication on the TELKOMNIKA (a Scopus indexed journal, SJR Q3)

Begin forwarded message:

From: Rezzy Eko Caraka <rezzyekocaraka@gmail.com>
Date: 23 October 2018 22.40.24 GMT+9
To: "Int. Conf. - ICW TELKOMNIKA" <icw.telkomnika@journal.uad.ac.id>
Subject: Re: [ICW-TELKOMNIKA 2018]: Preparing final camera ready paper for publication on the TELKOMNIKA (a Scopus indexed journal, SJR Q3)

Dear ICW Telkomnika Committee,
Please find the file attached our paper with id #1570469461 entitled "Neurocomputing Fundamental Climate Analysis".
At the moment, we already fill in the form and request to published on February 2019.
Please let me know If you need any document regarding this publication

Thank you

On Wed, Sep 26, 2018 at 3:00 PM Int. Conf. - ICW TELKOMNIKA <icw.telkomnika@journal.uad.ac.id> wrote:

Guideline to extend your paper of the 2018 1st International Conference and Workshop on Telecommunication, Computing, Electrical, Electronics and Control (2018 ICW-TELKOMNIKA) to be published on the TELKOMNIKA, a Scopus indexed journal, SJR Q3

Please pay attention to the details of this email

#1570469461 entitled "Neurocomputing Fundamental Climate Analysis"

Dear Prof/Dr/Mr/Mrs Rezzy Eko Caraka

TELKOMNIKA Telecommunication, Computing, Electronics and Control is a Scopus indexed journal, SJR Q3, and ONLY publishes high quality papers. A high quality paper has:
(1) a clear statement of the problem the paper is addressing;
(2) the proposed solution(s); and
(3) results achieved. It describes clearly what has been done before on the problem, and what is new. The goal of your revised paper is to describe novel technical results.

There are four types of technical results:
1. An algorithm;
2. A system construct: such as hardware design, software system, protocol, etc.; The

main goal of your revised paper is to ensure that the next person who designs a system like yours doesn't make the same mistakes and takes advantage of some of your best solutions. So make sure that the hard problems (and their solutions) are discussed and the non-obvious mistakes (and how to avoid them) are discussed.

3. A performance evaluation: obtained through analyses, simulation or measurements;

4. A theory: consisting of a collection of theorems.

Your revised paper should focus on:

1. Describing the results in sufficient details to establish their validity;

2. Identifying the novel aspects of the results, i.e., what new knowledge is reported and what makes it non-obvious;

3. Identifying the significance of the results: what improvements and impact do they suggest.

Second, change title of your paper. The title summarizes the main idea or ideas of your study. A good title contains the fewest possible words needed to adequately describe the content and/or purpose of your research paper. Rarely use abbreviations or acronyms unless they are commonly known. Find the below guide, how to update your paper title.

You have **14 days, until October 10, 2018** to revised your paper. Please submit your revised paper by reply this email (icw.telkomnika@journal.uad.ac.id), cc: tole@journal.uad.ac.id. Attach:

1. File Response to Mentor(s) Comments

2. File of your revised paper

When your revised paper reached us, it will be re-checked & reviewed by Editor(s) and Mentor(s) based on your response to Mentor & Coach comments and the following criteria: Relevance, Significance, Novelty, Technical correctness, Experimental/evidential support, Clarity of presentation and Reference to prior work and publications.

I am looking forward to receiving your revised paper.

Your cooperation is very appreciated.

Thank you,

Sincerely yours,

Tole Sutikno, Ph.D.
General Chair, 2018 ICW-TELKOMNIKA
Editor-in-Chief, TELKOMNIKA Telecommunication, Computing, Electronics and Control (Scopus indexed journal, Q3)
email: tole@journal.uad.ac.id

_____

Guideline for preparing your paper title:
_____

A good research paper title: (1) Condenses the paper's content in a few words & Use words that create a positive impression and stimulate reader interest; (2) Captures the readers' attention; (3) Indicate accurately the subject and scope of the study and Differentiates the paper from other papers of the same subject area. Five (5) Simple

steps to write a good research paper title:

STEP 1: Ask yourself these questions and make note of the answers:
What is my paper about?
What techniques/ designs were used?
Who/what is studied?
What were the results?

STEP 2: Use your answers to list key words.

STEP 3: Create a sentence that includes the key words you listed

STEP 4: Delete all unnecessary/ repetitive words and link the remaining.

STEP 5: Delete non-essential information and reword the title.

———————————————

Mentor & Coach Comments:

———————————————

Attached file and/or as Mentor comments in the 2018 ICW TELKOMNIKA workshop

General Guidelines:

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Neurocomputing Fundamental Climate Analysis

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Abstract
Rainfall is a natural phenomenon that needs to be studied more deeply and interesting to be analyzed. It involves numbers of human activities such as aviation, agriculture, fisheries, and also disaster risk reduction. Moreover, the characteristics of rainfall data follows seasonality, fluctuation, not normally distributed and it makes traditional time series challenging to use. Therefore, neurocomputing model can be used as an alternative to extraction information from rainfall data and give high performance also accuracy. In this paper, we give short preview about SST Anomalies in Manado, Northern Sulawesi and at the same time comparing the performance of rainfall forecasting by using three types of neurocomputing methods such as Generalized Regression Neural Network (GRNN), Feedforward Neural Network (FFNN), and Localized Multi Kernel Support Vector Regression (LMKSVR). In a nutshell, all of neurocomputing methods give highly accurate forecasting as well as reach low MAPE FFNN 1.65%, GRNN 2.65% and LMKSVR 0.28%.

Keywords: *GRNN; LMKL SVR; Soft Computing; Rainfall*

1. Introduction

Prediction of daily, monthly rainfall information is essential and needed in various sectors [1-2].Sometimes, rainfall is difficult to predict accurately due to the dynamic precipitation and complex physical processes involved. Rainfall is one crucial element of weather because it is the primary source of water for life. Rainfall is very closely related to the various sectors of human activities such as agriculture, forestry, fisheries, or even in ecological and biodiversity [3-5] El Niño begins with rainy season withdrawal and the beginning of the dry season forward and the length of the rainy season occurs shorter while the dry season is more extended. La Niña begins with the rainy season happening faster and the beginning of the dry season backward and the length of the rainy season occurs longer term shorter dry season [6-7]. However, Statistics has an essential role in explaining the phenomenon and information on the problems that exist around. In the heart of statistical environment, numbers of techniques has been used in climatology analysis, especially in the field of neurocomputing application of forecasting, regression, classification and also cluster. Neurocomputing is considered important because data can be extracted as information to decision making. The determination of the beginning of the season and the length of the season is based on Indonesian Agency for Meteorological, Climatological and Geophysics (BMKG) by taking only the parameters of the amount of 10 days rainfall as a consideration. The length of the rainy season is calculated from the first 10 days of the rainy season before the beginning of the dry season. The long dry season is calculated from the first 10 days of the dry season before the start of the rainy season.

2. Research Method

The concept of neurocomputing is far-reaching. In this paper, we only perform neurocomputing simulation by using feedforward neural network, general regression neural network, and localized multi-kernel support vector regression.

2.1 Feed Forward Neural Network

Artificial Neural Network (ANN), or more commonly known as Neural Network (NN), is an information processing system which has characteristics similar to a biological neural network [8-9] ANN is a machine designed for modeling the way the human brain works in doing specific functions or tasks. FFNN is a specific form of Multi-Layer Perceptron (MLP) with one hidden layer. The typical form of FFNN model is written in the following equation:

$$X_t = \psi_o\{ w_{bo} + \sum_{j=1}^{H} w_{jo} \; \psi_j \; (w_{bj} + \sum_{i=1}^{p} w_{ij} \; X_{t-i})\} \tag{1}$$

With

ψ_o : The activation function used in output layer
ψ_j : The activation function used in hidden layer
w_{ij} : The weight of neuron i in input layer to neuron j in hidden layer
w_{bj} : The bias weight in input layer to neuron j in hidden layer
w_{jo} : The weight of neuron j in hidden layer to output layer
w_{bo} : The bias weight in hidden layer to output layer

2.2 Localized Support Vector Regression

Support Vector Regression (SVR) [10-11] is the development of SVM for regression cases [12]. The purpose of SVR is to find a function $f(x)$ as a hyperplane in the form of a regression function which corresponds to all input data with an error ε and makes ε as thin as possible [13]. Suppose there are l training data,(x_i, y_i), $i = 1,..,l$ l where x_i is the input vector $x = \{x_1, x_2, ... x_n\} \subseteq \Re^n$ and the scalar output $y = \{y_i, ... y_l\} \subseteq \Re$ and l are the number of training data. However, we want to determine a function $f(x)$ having the largest deviation ε from the actual target y_i for all training data. If the value of ε is equal to 0 then a perfect regression equation is obtained. The purpose of SVR is to map the vector inputs into the higher dimensions [14]. Suppose a function follows the regression line as the optimal hyperplane[10] :

$$f(x) = w^T \varphi(x) + b \tag{2}$$

With

w = weighted vector
$\varphi(x)$ = Function that maps x to space of dimension l
b = bias

Kernel machines learn a decision function regarding kernel values between training instances, $\{x_i\}_{i=1}^{N}$ dan test instance x as follows $f(x) = \sum_{i=1}^{N} \alpha_i k(x_i, x) + b$. Commonly, kernel function used is linear kernel $\varphi(x) = K(x,x') = x^T x$ and Kernel *Polynomial* $\varphi(x) = K(x,x') = ((x^T x) + 1)^d$. x and x' are pairs of two training data. Parameter $d > 0$ is a constant [15]. Which kernel function should be used for dot product substitution in feature space is highly dependent on data because this kernel function will determine the new features in which the separator function will be searched [16].

2.3 General Regression Neural Network

General Regression Neural Network (GRNN) is one network model radial basis which is often used to approach a function. The basis of the GRNN operation is essentially based on nonlinear regression (kernel) where the estimation of the expected output value is determined by the set of its inputs [17]. Although GRNN produces a multivariate vector output, with no prejudice to the description of the GRNN operating logic in this section it ,is simplified for the case of univariate output only [18].

$$E[y|x] = \frac{\int_{-\infty}^{\infty} y f(X,y) dy}{\int_{-\infty}^{\infty} f(X,y) dy} \tag{3}$$

In this case, y is the output predicted by GRNN, whereas X is the input vector $(x_1, x_2, ..., x_p)$ consisting of p predictor variable. $E[y|x]$ is the expected value of the output y given the input vector X and $f(X,y)$ is the joint probability density function of X and y. To justify the accuracy, we using mean Absolute Percent Error (MAPE) which is smaller MAPE amount indicates that the model used for forecasting is gives more accurate with the following equation as bellow:

$$MAPE = \frac{\sum_{t=1}^{n} |(\frac{X_t - F_t}{X_t}) x 100\%|}{n} \tag{4}$$

With,

X_t : Actual data at period-t
F_t : Prediction data at period-t
n : Number of observation
t : Period to $1,2,3,...,t$

Table 1. MAPE Interpretation

MAPE	Interpretation
< 4.9%	Highly Accurate Forecasting
5%-9.9%	Accurate Forecasting
10%-14.9%	Good Forecasting
15%-19.9%	Reasonable Forecasting
> 20%	Inaccurate Forecasting

3 Analysis

3.1 Climate Analysis and pre-modeling

Manado is the capital of North Sulawesi can be seen in Figure 1 which province with a tropical climate located in the Northern Hemisphere. Monsoon winds that blow periodically for two times per year become one of the leading factors that cause fluctuations in the amount of rainfall in each month. West monsoon (Asian monsoon) blows from October to March when the sun's pseudo position is in the Southern Hemisphere. This condition causes high air pressure in the Asian region and low pressure in Australia causes winds blowing from the Asian continent to the Australian continent. In the process of western monsoon passing through the Indian Ocean that has a lot of water vapor supply, thus causing the territory of Indonesia to receive additional water vapor that causes the month of October to March has greater rainfall potential or in general the territory of Indonesia, including Manado rainy season. Then the east monsoon (Australian monsoon) blows from April to September when the sun's pseudo position is in the Northern Hemisphere. This condition causes high air pressure in Australian territory, and low pressure in Asia causes winds blowing from the Australian continent to the Asian continent. In the process of tracing the East monsoon through the dried or desert strands of the Australian Ocean that cause the Indonesia region, including Manado to receive dry air, creating the low rainfall potential which in general the part of Indonesia is experiencing the dry season.
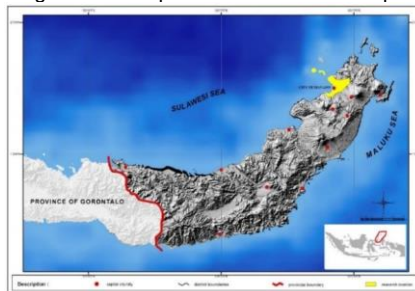

Figure 1. Manado, Indonesia

Figure 2 and Figure 3 explain the average rainfall of 30 years (1981-2010). Rain patterns in the Manado region could be distinguished between the rainy season and the dry season. Distribution of monthly rainfall U-shaped, the maximum amount of rainfall occurs in December-January-February (DJF). When the monsoon west of the amount of rain abundant, on the contrary when the eastern monsoon the amount of rainfall is minimal, while the minimum amount of rainfall occurs in June-July-August (JJA). In climatological science. It needs to be analyzed at 30 years because of the time span of the year has covered various global, regional and local phenomena (land breeze, monsoon wind, and El Nino–Southern Oscillation, Madden Julian Oscillation, and Pacific Decadal Oscillation, dipole mode). At the same time, rainfall tends to be caused by a particular factor (e.g., only an average of 5 years may be in one of those years there is a significant El-Nino phenomenon, so the average value becomes low)
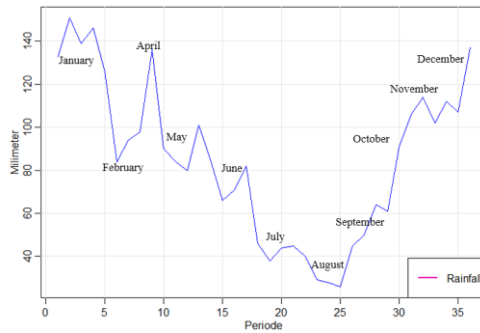
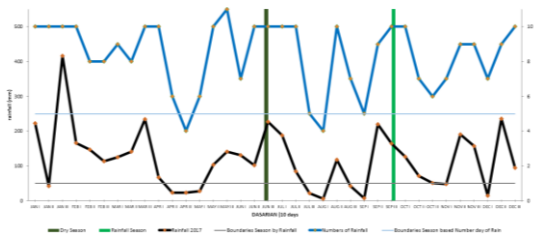Figure 2. Rainfall 1980-2010 (30 years)

Figure 3. Characteristics of Rainfall in Manado, Northern Sulawesi 1980-2010 (30 years)

Weather and global climate are a unified whole. The interaction between the atmosphere and the ocean will form a system that affects the weather and climate in Indonesia. Sub-surface monitoring results the global temperature in Figure 4 shows that the anomaly in the equatorial Pacific is still cold with a value close to zero.
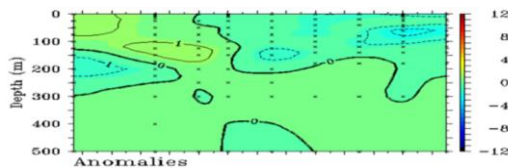

Figure 4 SST Anomalies in Northern Sulawesi

The warming of sea surface temperature (SST) around the waters of North Sulawesi has an impact on increasing the supply of water vapor as a material for the formation of rain clouds. Figure 5 shows that the Northern SST anomaly is not warmer than the southern part of North Sulawesi province although both areas are positive.
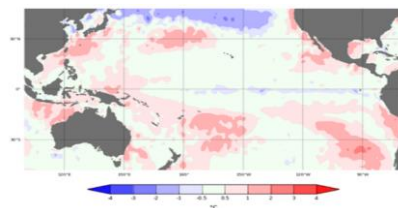

Figure 5. Sea Surface Temperature Anomaly

3.2   Neuro Computing

Numbers of techniques are used in climatological analysis such as copula used for pattern analysis of El Nino and La Nina[6][19]. Application of short memory and long memory method for rainfall prediction and temperature [20] using of spline method, wavelet, and traditional time series. More popular in 20 years is the development of machine learning methods[21] such as a neural network, support vector machine, support vector regression. In this paper, we will use some of these methods to see the performance comparison of each model. After analyzing pre-modeling, the goal researchers to get the full picture of the information before building the model. This activity is essential to do because before creating the model it would be better to know what the phenomenon happened. In time series modeling, data now influenced by past data so that in this case the input data on the neural network. However FFNN [22] and GRNN using lag identification as an input component which is based on lags that have the most significant PACF value. However, this is due to the characteristics of Neural network model has in common with AR model. Based on the identification of the lag that can be seen in figure 7. There are 3 lags significant which will be used as the component of data input, namely lag 2, 4, and 8 or it can be said that X_t is influenced by X_{t-2}, X_{t-4}, X_{t-8}.
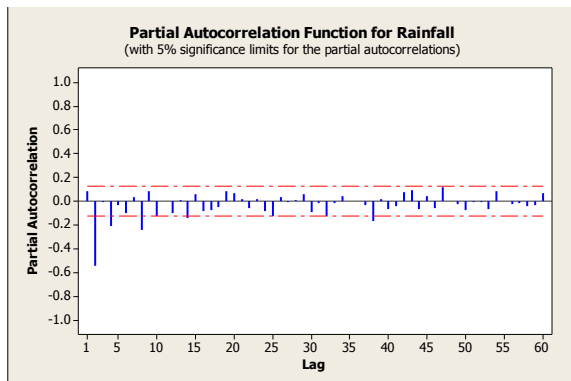

Figure 6. PACF Rainfall

3.2.1 GRNN

The application of the General Regression Neural Network in forecasting consists of two stages: the training stage and the testing phase. GRNN network consists of four layers of processing units: the input layer, the pattern layer, the summation layer and the output layer. In the input layer consists of 3 units of neurons representing data return and 1 unit of input bias (b). 1 unit of input bias then passes data to the pattern layer with the input weight whose value is equal to the data from the input neuron, it will be repeated continuously until all data in the input neuron is sent completely to pattern neurons. At the same time, 1 unit of biased neurons also passes data to the pattern layer with the name of the input bias weight equal to *1/spread*. Also, it will be repeated until all the data in the neuron bias is entirely sent to the pattern neuron. This illustration can be seen in Figure 7.
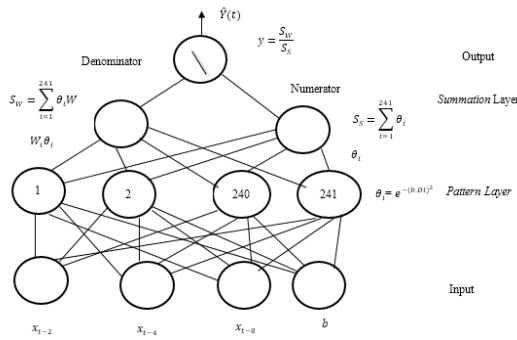
Figure 7. Architecture Rainfall GRNN

The number of input bias weights is equal to the input data rainfall 241. The spread value is the radial function with the standard value = 1. The pattern layer consists of 241 neurons formed in the GRNN network training process. Each neuron of the pattern layer learns by finding the distance between the input weights data (D_i), then searches for the value of θ_i where θ_i in GRNN modeling using matlab is a basic radial activation function by obtaining input from the distance between data by obtaining input from the distance between input weight data and input bias $\theta_i = e^{-(X-U_i)'(X-U_i)/2\sigma^2}$. Furthermore, we obtained by GRNN to forecasting rainfall from the optimum weight of the training result. The GRNN model can be written as follows:

$$\hat{Y}(t) = \frac{S_W}{S_S} = \frac{\sum_{i=1}^{241} W_i \times \theta_i}{\sum_{i=1}^{241} \theta_i} = \frac{\sum_{i=1}^{241} W_i \times e^{-(b\sqrt{(X_{t-2}-X_{t-i}i)^2+(X_{t-4}-X_{t-4}i)^2+(X_{t-8}-X_{t-8}i)^2}}}{\sum_{i=1}^{241} e^{-(b\sqrt{(X_{t-2}-X_{t-i}i)^2+(X_{t-4}-X_{t-2}i)^2+(X_{t-8}-X_{t-12}i)^2}}}$$

3.2.2 FEEDFORWARD NEURAL NETWORK

The network architecture to be used in the FFNN model [23-24] is a multilayer network which consisting of input layer, a hidden layer, and output layer. In the determination of the number of units in the input layer, there is no standard provision. Likewise, with the number of units in the hidden layer and output layer. Therefore, the problem is limited to the number of hidden layer units equal to the number of units in the input layer [25]. However, the network architecture that is formed consists of 4 units of variable inputs that are considered influential, 1 hidden layer consisting of 4 neurons, 1 neuron at the output layer and bias. While the activation function used in the hidden layer to the output layer is the binary sigmoid (sigmoid logistics) and the activation function used for the output signal is the function of idensity (purelin). Based on the FFNN network architecture that has been formed then the number of weights or parameters to be estimated using genetic algorithm 25 units consisting of 16 weights of neuron to give input signal on *hidden layer* (w_{ij}), 4 bias weight for *hidden layer* (w_{bj}), 4 the weight of the neuron to produce the output *layer* (w_{jo}) and 1 bias weight for the *output layer* (w_{bo}) can be seen in Figure 8 and Table 2.
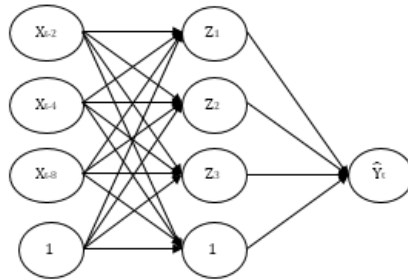
Figure 8. Architecture Rainfall GRNN

Table 2. Optimum weight

Xt	w_{bj}	w_{ij}			w_{bo}	w_{jo}
$Xt-1$	0.658	0.20	0.9912	0.952	0.1799	-0.132
$Xt-4$	-0.9768	0.181	0.084	0.4321		0.896
$Xt-8$	-0.9928	0.012	0.431	0.725		0.784

$$\hat{X}_t = 0.1799 + \frac{-0.132}{1+\exp(-(0.658+0.20X_{t-1}+0.181X_{t-4}+0.012X_{t-8}))} +$$

$$\frac{0.8966}{1+\exp(-(0.768+0.9912X_{t-1}+0.084X_{t-4}+0.9023X_{t-8}))} + \frac{0.784}{1+\exp(-(-0.9928+0.012X_{t-1}+0.431X_{t-4}+0.725X_{t-8}))}$$

3.2.3 LOCALIZED MULTI KERNEL SUPPORT VECTOR REGRESSION

We extend SVR to LMKSVR. The idea of this localized kernel We can also apply the localized kernel idea to ϵ-tube SVR [26]. The decision function is rewritten as:

$$f(x) = \sum_{m=1}^{P} \eta_m(x|V)\langle w_m, \Phi_m(x^m)\rangle + b \tag{5}$$

Moreover, the modified primal optimization problem is:

$$minimize \ \frac{1}{2}\sum_{m=1}^{P}\|w_m\|_2^2 + C\sum_{i=1}^{N}(\xi_i^+ + \xi_i^-)$$

$$with \ respect \ to \quad w_m \in \mathbb{R}^{S_m}, \xi^+ \in \mathbb{R}_+^N, \xi^- \in \mathbb{R}_+^N, V \in \mathbb{R}^{P\times(D_g+1)}, b \in \mathbb{R}$$

$$subject \ to \quad \in +\xi_i^+ \geq y_i - \sum_{m=1}^{P}\eta_m(x_i|V)\langle w_m, \Phi_m(x_i^m)\rangle - b \quad \forall i$$

$$\in +\xi_i^- \geq \sum_{m=1}^{P}\eta_m(x_i|V)\langle w_m, \Phi_m(x_i^m)\rangle + b - y_i \quad \forall i$$

Where $\{\xi^+, \xi^-\}$ are the vectors of slack variables and ϵ is the width of the regression tube. For a given V, the corresponding dual formulation is:

$$maximize \ J(V) = \sum_{i=1}^{N} y_i(\alpha_i^+ - \alpha_i^-) - \epsilon\sum_{i=1}^{N}(\alpha_i^+ + \alpha_i^-)$$

$$-\frac{1}{2}\sum_{i=1}^{N}\sum_{j=1}^{N}(\alpha_i^+ - \alpha_i^-)(\alpha_j^+ - \alpha_j^-)k_\eta(x_i, x_j)$$

$$with \ respect \ to \quad \alpha^+ \in \mathbb{R}_+^N, \alpha^- \in \mathbb{R}_+^N$$

$$subject \ to \quad \sum_{i=1}^{N}(\alpha_i^+ - \alpha_i^-) = 0$$

$$C \geq \alpha_i^+ \geq 0 \quad \forall i$$

$$C \geq \alpha_i^- \geq 0 \quad \forall i$$

And the resulting decision function is

$$f(x) = \sum_{i=1}^{N}(\alpha_i^+ - \alpha_i^-)k_\eta(x_i, x) + b. \tag{6}$$

To predict with LMKSVR first, we must determine the parameter value of C and epsilon by two kernels. In this research we use two type of kernel at the same time we proposed grid algorithm combined with cross-validation. Which is the leave-one-out method in training data. Furthermore, we were using the experimental cost 0.1,1,10,100 while the epsilon value of the experiment. So, the results obtained in Table 3 as follows:

Table 3. *Grid Search – Cross Validation*

	cost	epsilon	Error
1	0.1	0.1	90.183
2	**1**	0.1	**52.666**
3	10	0.1	59.474

4	100	0.1	61.335
5	0.1	0.01	74.926
6	1	0.01	60.431
7	10	0.01	54.650
8	100	0.01	55.447
9	0.1	0.001	88.619
10	1	0.001	68.121
11	10	0.001	66.922
12	100	0.001	66.991
13	0.1	0.0001	82.112
14	1	0.0001	69.888
15	10	0.0001	68.458
16	100	0.0001	78.780

From Table 3 we get the best C and epsilon values by looking at the smallest error value of Grid Search cross-validation process. Cross-Validation used in default R program which Leave One out (LOO) so that the best parameter value is C = 1 and epsilon = 0.1. After the best parameters are determined then the value of C and epsilon used to map training data to feature space using linear kernel functions $\varphi(x) = K(x, x') = x^T x$ and radial basis $\varphi : x \rightarrow \varphi(x)$ $K_{RBF}(x,x') = \exp[-\frac{1}{2}\|x - x'\|^2$. So, we get the kernel equation as above calculation and then used for mapping data of higher dimension training. To get the values from the parameters w and b, use the Quadratic Programming Function. After the values of α and α* are obtained, the w value is calculated by $w = \sum_{i=1}^{l}(\alpha_i - \alpha_i^*)\varphi(x_i)$. Moreover, the parameter values b or bias formed is the optimal value of the calculation as follows: $b = y_i - w^T\varphi(x_i)$ for linear and $b = y_i - w^T\varphi(x)K_{RBF}(x,x')$. So, by entering the value yi, w, $\varphi(x_i)$ and ε we obtained the parameter value b for hyperplane with linear kernel and radial basis function is: b = -0.000192. The results of w and bias values are as Table 4:

Table 4. w and bias

Variable	W	B
x2	0.8727	
x4	0.00183	0.000192
x8	0.000065	

From Table 4 it can be seen that the value of beta and w will be used in finding support vector, the resulting support vector will be used to predict using the SVR equation that is formed. Based on the results in Table 3 and Table 4 can be seen the data value of rainfall which is a support vector is 241 data, the data is inserted into the hyperplane equation so that the optimal model generated as follows:

$$f(x) = \sum_{i=1}^{l}\beta_i\varphi^T(x_i)K_{Linear}K_{RBF} + b$$

$$= (0.8727 \quad 0.00183 \quad 0.000065)\begin{pmatrix}x2\\x4\\x8\end{pmatrix}+0.000192$$

$$f(x) = (0.8727\,(x2) + 0.00183(x4) + 0.000065(x8))+0.00192$$

The result of the equation f (x) above for subsequent use in training and testing data as a predictor for subsequent use to find the error by using MAPE

3.2.4 COMPARING MODELS

There are rates of rainfall based on BMKG, Indonesia [7][27][28][29]:
1. Moderate shower, 20 - 50 mm per day.
2. Heavy shower, 50 - 100 mm per day.
3. Violent shower, above 100 mm per day

After performed forecasting, we compare with actual data in February 2018 can be seen in figure 9. Soft computing by using feedforward neural network, general regression neural network, and localized multi-kernel support vector regression obtained that the average value of rainfall in Manado is 11.68mm so that the general level of rain on that month is low. However, on a specific day rainfall in Manado reaches 45.1 mm. After getting the best model then done compare between FFNN, GRNN, and LMKSVR Kernel Linear and Kernel Radial Basis.
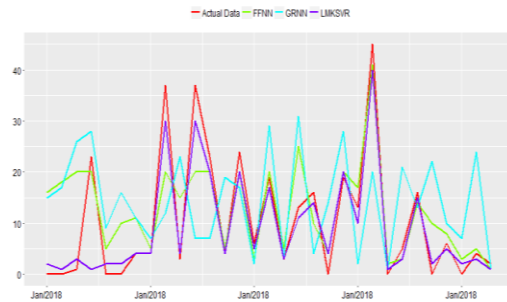
Figure 9. Comparing Models

From Table 5 we can see that all of neurocomputing models FFNN, GRNN as well as LMKLSVR give highly accurate forecasting by justified MAPE and RMSE. At the same time, our best model is Localized Multi Kernel Support Vector Regression.

Table 5. Accuracy

Model	MAPE	RMSE	Category
FFNN	1.65%	8.54	Highly Acurate Forecasting
GRNN	2.65%	14.93	Highly Acurate Forecasting
LMKSVR	0.28%	4.756	Highly Acurate Forecasting

6   Conclusion

Rainfall data has a considerable variation compared to other climatic elements, both variations by place or time. Rainfall data is usually stored in one day and continuous. By knowing rainfall data, we can make observations in an area for development in agriculture and plantation as well as other fields. Also, it can also be used to determine the potential of an area against natural disasters caused by rain factors. However, based on the comparison by using neurocomputing, it is found that the results of the forecast method using FFNN, GRNN, and LMKSVR give highly accurate forecasting.

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Commented [REC1]: Dear Dr.Ismail.
As I know that we are not allowed to change the title instead of not-English language into the English .

At the same time, I already read carefully TELKOMNIKA template, However, There are no specific rules for changing titles.