**LEMBAR HASIL PENILAIAN SEJAWAT SEBIDANG ATAU PEER REVIEW**
**KARYA ILMIAH : JURNAL ILMIAH**

**Judul Jurnal Ilmiah (Artikel)**
New algorithm for detection and fault classification on parallel transmission line using DW T and BPNN based on Clarke's transformation

**Jumlah Penulis**
5 (lima orang)

**Status Pengusul**
Penulis pertama / Penulis ke 2 / Penulis korespondensi

**Identitas Jurnal Ilmiah**
- Nama Jurnal: Neurocomputing
- Nomor ISSN: 09252312
- Volume, nomor, bulan, tahun: Volume 168, 30 November 2015,
- Penerbit: Elsevier BV
- Terindeks di Scimagojr/Thomson Reuters (IF 3.317) atau di Scopus**

**Kategori Publikasi Karya Ilmiah**
- Jurnal Ilmiah Internasional/Internasional bereputasi.
- Jurnal Ilmiah Nasional Terakreditasi
- Jurnal Ilmiah Nasional/Nasional terindeks di DOAJ, CABI, COPERNICUS**

**Hasil Penilaian Peer Review**

<table>
<thead>
<tr>
<th>Komponen Yang Dinilai</th>
<th>Nilai Maksimal Jurnal Ilmiah</th>
<th>Nilai Akhir Yang Diperoleh</th>
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<td>Internasional/Iternasional bereputasi**</td>
<td>Nasional Terakreditasi</td>
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<td>a. Kelengkapan unsur isi artikel (10%)</td>
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<tr>
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<tr>
<td>c. Kecukupan dan kemutahiran data/informasi dan metodologi (30%)</td>
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<td>d. Kelengkapan unsur dan kualitas terbitan/Jurnal (30%)</td>
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**Nilai Pengusul = 24**

**Catatan Reviewer**:
Publikasi ini, jurnal ilmiah internasional berpublikasi di Thomson (Infact factor 3.317) dan Scopus, sum string Jurnal Buku (SJR) 0,968. Q1.

Makassar, 23 April 2019
Reviewer 1

Prof. Dr. Ir. Salama Manjang, MT
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Unit kerja: Departemen Teknik Elektro, Fakultas Teknik UNHAS
*Dinilai oleh dua Reviewer secara terpisah
**corat yang tidak perlu
***nasional/terindeks di DOAJ, CABI, Copernicus*
LEMBAR
HASIL PENILAIAN SEJAWAT SEBIDANG ATAU PEER REVIEW
KARYA ILMIAH: JURNAL ILMIAH*

Judul Jurnal Ilmiah (Artikel) : New algorithm for detection and fault classification on parallel transmission line using DWT and BPNN based on Clarke's transformation
Jumlah Penulis : 5 (lima) orang
Status Pengusul : Penulis Pematera / Penulis ke 2 / Penulis korespondensi
Identitas Jurnal Ilmiah
a. Nama Jurnal : Neurocomputing
b. Nomor ISSN : 0925-2312
c. Volume, nomor, bulan, tahun : Volume 168, 30 November 2015
d. Penerbit : Elsevier BV
e. DOI artikel (Jika ada) : https://doi.org/10.1016/j.

g. Terindeks di Scimagojr/Thompson Reuters (IF=3.317) atau di Scopus***

Kategori Publikasi Karya Ilmiah : ✔ Jurnal Ilmiah Internasional / Internasional bereputasi **
                                      ❌ Jurnal Ilmiah Nasional Terakreditasi
                                      ❌ Jurnal Ilmiah Nasional / Nasional terindeks di DOAJ, CABI, COPERNICUS **

Hasil Penilaian Peer Review: Nilai max = 0.6 x 40 = 24

<table>
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<th>Komponen Yang Dinilai</th>
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<td>f. Kelengkapan unsur dan kualitas terbitan/jurnal (30%)</td>
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<td>Total = (100%)</td>
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Nilai Pengusul = 24

Catatan Reviewer:
Artikel terindeks di scopus.com, scimagojr.com (h-index = 100, Q1/Q2 dengan SJR = 1.073). Artikel ini juga termuat pada jurnal yang terdahulu pada Clarivate Analytics. Hal ini menunjukkan bahwa artikel termuat pada jurnal yang bereputasi Internasional.

Makassar, 30 April 2019
Reviewer 2

Prof. Dr.Eng. Syafaruddin, S.T, M.Eng
NIP. 19740530 199903 1 003
Unit Kerja: Departemen Teknik Elektro, Fakultas Teknik UNHAS

*Dimiliki oleh dua Reviewer secara terpisah
**coret yang tidak perlu
***Nasional/terindeks di DOAJ, CABI Copernicus
Neurocomputing

Country
Netherlands - SIR Ranking of Netherlands

Subject Area and Category
Computer Science
   Artificial Intelligence
   Computer Science Applications
Neuroscience
   Cognitive Neuroscience

Publisher
Elsevier BV

Publication type
Journals

ISSN
09252312

Coverage
1989-ongoing

Scope
Neurocomputing publishes articles describing recent fundamental contributions in the field of neurocomputing. Neurocomputing theory, practice and applications are the essential topics being covered. Neurocomputing welcomes theoretical contributions aimed at winning further understanding of neural networks and learning systems, including, but not restricted to, architectures, learning methods, analysis of network dynamics, theories of learning, self-organization, biological neural network modelling, sensorimotor transformations and interdisciplinary topics with artificial intelligence, artificial life, cognitive science, computational learning theory, fuzzy logic, genetic algorithms, information theory, machine learning, neurobiology and pattern recognition.

Homepage

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Quartiles

The set of journals have been ranked according to their SJR and divided into four equal groups, four quartiles. Q1 (green) comprises the quarter of the journals with the highest values, Q2 (yellow) the second highest values, Q3 (orange) the third highest values and Q4 (red) the lowest values.

Artificial Intelligence
   1999
   Q3

Artificial Intelligence
   2000
   Q3
The SJR is a size-independent prestige indicator that ranks journals by their 'average prestige per article'. It is based on the idea that 'all citations are not created equal'. SJR is a measure of scientific influence of journals that accounts for both the number of citations received by a journal and the importance or prestige of the journals where such citations come from. It measures the scientific influence of the average article in a journal and expresses how central to the global scientific arena this journal has been in the last years.

Citations per document

This indicator counts the number of citations received by documents from a journal and divides them by the total number of documents published in that journal. The chart shows the evolution of the average number of times documents published in a journal in the past two, three and four years have been cited in the current year. The two years line is equivalent to journal impact factor™ (Thomson Reuters) metric.

<table>
<thead>
<tr>
<th>Year</th>
<th>Cites / Doc. (4 years)</th>
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<td>2006</td>
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<td>2007</td>
<td>1.379</td>
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<td>2008</td>
<td>1.508</td>
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</table>

Total Cites and Self-Cites

Evolution of the total number of citations and journal's self-citations received by a journal's published documents during the three previous years. Journal self-citation is defined as the number of citations from a journal citing article to articles published by the same journal.

<table>
<thead>
<tr>
<th>Year</th>
<th>SlfCit</th>
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<tbody>
<tr>
<td>1999</td>
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</table>

External Cites per Doc and Cites per Doc

Evolution of the number of total citation per document and external citation per document (i.e. journal self-citations removed) received by a journal's published documents during the three previous years. External citations are calculated by subtracting the number of self-citations from the total number of citations received by the journal's documents.

% International Collaboration

International Collaboration accounts for the articles that have been produced by researchers from several countries. The chart shows the ratio of a journal's documents signed by researchers from more than one country; that is including more than one country address.

Citable documents and Non-citable documents

Ratio of a journal's items, grouped in three years windows, that have been cited at least once vs. those not cited during the following year.

<table>
<thead>
<tr>
<th>Year</th>
<th>Uncited documents</th>
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<td>2001</td>
<td>304</td>
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<td>2002</td>
<td>385</td>
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</table>

Cited documents and Uncited documents

Not every article in a journal is considered primary research and therefore "citable", this chart shows the ratio of a journal's articles including substantial research (research articles, conference papers and reviews) in three year windows vs. those documents other than research articles, reviews and conference papers.
Chunning Du 1 month ago

It is a good journal. Hope to have a paper in it.

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Asuhami Mohd Zin, A.¹, Saini, M.², Mustafa, M.W.³, Sultan, A.R.³, Rahimuddin²

New algorithm for detection and fault classification on parallel transmission line using DWT and BPNN based on Clarke’s transformation
DOI: 10.1016/j.neucom.2015.05.026

² Faculty of Electrical Engineering, Universiti Teknologi Malaysia (UTM), Johor Bahru, 81310, Malaysia
³ Faculty of Engineering, Universitas Hasanuddin, Makassar, South Sulawesi, 90245, Indonesia

Abstract
This paper presents a new algorithm for fault detection and classification using discrete wavelet transform (DWT) and back-propagation neural network (BPNN) based on Clarke’s transformation on parallel transmission. Alpha and beta (mode) currents generated by Clarke’s transformation were used to convert the signal of discrete wavelet transform (DWT) to get the wavelet transform coefficients (WTC) and the wavelet energy coefficient (WEC). Daubechies4 (Db4) was used as a mother wavelet to decompose the high frequency components of the signal error. The simulation was performed using PSCAD/EMTDC for transmission system modeling. Simulation was performed at different locations along the transmission line with different types of fault and fault resistance, fault location and fault initial angle on a given power system model. Four statistic methods utilized are in the present study to determine the accuracy of detection and classification faults. The results show that the best Clarke transformation occurred on the configuration of 12-24-48-4, respectively. For instance, the errors using mean square error method, the errors of BPNN, Pattern Recognition Network and Fit Network are 0.03721, 0.13115 and 0.03728, respectively. This indicates that the BPNN results are the lowest error. © 2015 Elsevier B.V.

Author Keywords
Back-propagation neural network; Clarke’s transformation; Fault detection; Fault location; Transmission parallel line; Wavelet transformation

Index Keywords
Algorithms, Backpropagation, Backpropagation algorithms, Discrete wavelet transforms, Electric fault location, Electric power transmission, Errors, Location, Mean square error, Neural networks, Pattern recognition, Signal detection, Torsional stress, Transmission line theory, Wavelet transforms; Back propagation neural networks, Clarke’s transformation, Fault detection and classification, Parallel line, Parallel transmission lines, Wavelet energy coefficients, Wavelet transform coefficients, Wavelet transformations; Fault detection; algorithm, Article, artificial neural network, back propagation neural network, Clarke transformation, comparative study, controlled study, discrete wavelet transform, error, Fit Network, mathematical analysis, mathematical parameters, pattern recognition network, priority journal, simulation, standard error, statistical analysis, variance error, wavelet energy coefficient, wavelet transform coefficient

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A new algorithm for detection and fault classification on parallel transmission line using DWT and BPNN based on Clarke’s transformation

Title: New algorithm for detection and fault classification on parallel transmission line using DWT and BPNN based on Clarke’s transformation

Author(s): Zin, AAM (Zin, Abdullah Asuhami Mohd); Saini, M (Saini, Makmur); Mustafa, MW (Mustafa, Mohd Wazir); Sultan, AR (Sultan, Ahmad Rizal); Rahimuddin (Rahimuddin)

Source: NEUROCOMPUTING Volume: 168 Pages: 983-993 DOI: 10.1016/j.neucom.2015.05.026 Published: NOV 30 2015

Abstract: This paper presents a new algorithm for fault detection and classification using discrete wavelet transform (DWT) and back-propagation neural network (BPNN) based on Clarke’s transformation on parallel transmission. Alpha and beta (mode) currents generated by Clarke’s transformation were used to convert the signal of discrete wavelet transform (DWT) to get the wavelet transform coefficients (WTC) and the wavelet energy coefficient (WEC). Daubechies 4 (Db4) was used as a mother wavelet to decompose the high frequency components of the signal error. The simulation was performed using PSCAD/EMTDC for transmission system modeling. Simulation was performed at different locations along the transmission line with different types of fault and fault resistance, fault location and fault initial angle on a given power system model. Four statistic methods utilized are in the present study to determine the accuracy of detection and classification faults. The results show that the best Clarke transformation occurred on the configuration of 12-24-48-4, respectively. For instance, the errors using mean square error method, the errors of BPNN, Pattern Recognition Network and Fit Network are 0.03721, 0.13115 and 0.03728, respectively. This indicates that the BPNN results are the lowest error. (C) 2015 Elsevier B.V. All rights reserved.

Accession Number: WOS:000359168000037

Author Identifiers:

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<th>ORCID Number</th>
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<td>Saini, Makmur</td>
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eISSN: 1872-8286
SURAT TUGAS
Nomor : 467 /PL10/RT.01.00/2019

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   Jabatan : Ketua Departemen Teknik Elektro Fakultas Teknik UNHAS
   Sebagai : Peer Review 1

   NIP : 19740530 199903 1 003
   Jabatan : Ketua Program Magister Teknik Elektro Fakultas Teknik UNHAS
   Sebagai : Peer Review 2

untuk menilai karya ilmiah usul jabatan Profesor a.n. Ir. Makmur Saini. M.T., Ph.D.

Demikian surat tugas ini untuk dilaksanakan dengan sungguh-sungguh dan penuh rasa tanggung jawab.

[Signature]

Prof. Dr. Muhammad Anshar, M.Si., Ph.D.
NIP 19600817 198903 1 002