

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

Judul karya ilmiah (artikel) : The Built Environment and its Impact on Transit based Transportation Users Walking Activity in Semarang, Indonesia.

Jumlah Penulis : 3 Penulis

Status Pengusul : Penulis Utama* (Anita Ratnasari Rakhmatulloh*; **Diah Intan Kusumo Dewi**; Dinar Mutiara Kusumo Nugraheni)

Identitas Jurnal Ilmiah : a. Nama Jurnal : Pertanika Journal of Science & Technology
b. Nomor ISSN : ISSN 0128-7680; e-ISSN 2231-8526
c. Vol.,no.,bulan,tahun : 29., 2., April., 2021
d. Penerbit : UPM Press Pertanika Malaysia

e. DOI artikel : <https://doi.org/10.47836/pjst.29.2.05>
f. Alamat web jurnal : <http://www.pertanika.upm.edu.my/pjst/browse/regular-issue>
g. Terindeks di : DOAJ, Google Scholar, Scopus

Kategori Publikasi Jurnal Ilmiah : ☒ Jurnal Ilmiah Internasional /internasional bereputasi
(beri ✓ pada kategori yang tepat) ☐ Jurnal Ilmiah Nasional Terakreditasi
☐ Jurnal Ilmiah Nasional /Nasional di DOAJ, Google Scholar

Hasil Penilaian *Peer Review* :

Komponen Yang Dinilai	Nilai Maksimal Jurnal Ilmiah			Nilai Akhir Yang Diperoleh
	Internasional/ internasional bereputasi 40	Nasional Terakreditasi	Nasional	
a. Kelengkapan unsur isi artikel (10%)	4			3
b. Ruang lingkup dan kedalaman pembahasan (30%)	12			10
c. Kecukupan dan kemutakhiran data/informasi dan metodologi (30%)	12			10
d. Kelengkapan unsur dan kualitas terbitan/jurnal (30%)	12			11
Total = (100%)	40			
Nilai Pengusul : $40\% \times 34 = 13.6 : 2 = 6.8$				34

Catatan Penilaian artikel oleh Reviewer :

- a) Kesesuaian dan kelengkapan unsur artikel: Artikel sesuai dengan tema prosiding, unsur artikel (abstract, introduction, methods, result and discussion, conclusion).
- b) Ruang lingkup dan kedalaman pembahasan: Ruang lingkup artikel relevan dengan topik jurnal, analisis dan pembahasan jelas dan detail ada dialog dengan literatur pendukung, kesimpulan sesuai tujuan penelitian.
- c) Kecukupan dan kemutakhiran data/informasi dan metodologi: Data cukup, metode cukup mutakhir untuk operasionalisasi analisis. Referensi banyak dan tahun terkini.
- d) Kelengkapan unsur dan kualitas terbitan: Unsur dan kualitas jurnal terindex scopus Q4 dengan SJR 0,17. Similarity index Turnitin 7%. Sebagai penulis utama, dapat digunakan sebagai prasyarat untuk pengusulan kenaikan jabatan fungsional Lektor Kepala.

Semarang, Mei 2021
Reviewer 1,



Dr. Ir. Rina Kurniati, M.T.
NIP. 19660822 199702 2 001
Departemen PWK, FT. UNDIP

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

Judul karya ilmiah (artikel) : The Built Environment and its Impact on Transit based Transportation Users Walking Activity in Semarang, Indonesia.

Jumlah Penulis : 3 Penulis

Status Pengusul : Penulis Utama* (Anita Ratnasari Rakhmatulloh* ; **Diah Intan Kusumo Dewi**; Dinar Mutiara Kusumo Nugraheni)

Identitas Jurnal Ilmiah : a. Nama Jurnal : Pertanika Journal of Science & Technology
b. Nomor ISSN : ISSN 0128-7680; e-ISSN 2231-8526
c. Vol.,no.,bulan,tahun : 29., 2., April., 2021
d. Penerbit : UPM Press Pertanika Malaysia
e. DOI artikel : <https://doi.org/10.47836/pjst.29.2.05>
f. Alamat web jurnal : <http://www.pertanika.upm.edu.my/pjst/browse/regular-issue>
g. Terindeks di : DOAJ, Google Scholar, Scopus

Kategori Publikasi Jurnal Ilmiah : ☒ Jurnal Ilmiah Internasional /internasional bereputasi
(beri ✓ pada kategori yang tepat) ☐ Jurnal Ilmiah Nasional Terakreditasi
☐ Jurnal Ilmiah Nasional /Nasional di DOAJ, Google Scholar

Hasil Penilaian *Peer Review* :

Komponen Yang Dinilai	Nilai Maksimal Jurnal Ilmiah			Nilai Akhir Yang Diperoleh
	Internasional/ internasional bereputasi 40	Nasional Terakreditasi	Nasional	
a. Kelengkapan unsur isi artikel (10%)	4			4
b. Ruang lingkup dan kedalaman pembahasan (30%)	12			10
c. Kecukupan dan kemutakhiran data/informasi dan metodologi (30%)	12			10
d. Kelengkapan unsur dan kualitas terbitan/jurnal (30%)	12			11
Total = (100%)	40			35
Nilai Pengusul : $40\% \times 35 = 14 : 2 = 7$				

Catatan Penilaian artikel oleh Reviewer :

- Unsur artikel lengkap meliputi abstrak, pendahuluan, metode, hasil dan diskusi, serta kesimpulan.
- Pendahuluan baik karena menceritakan novelty yang diangkan dan membahas isu terkait dengan dukungan berbagai literatur. Metode yang digunakan mutakhir dan telah dijelaskan dengan lengkap. Pembahasan cukup mendalam dengan beberapa tahap analisis yang disajikan bersama beberapa gambar dan tabel. Kesimpulan telah menjawab pertanyaan penelitian dan memberikan pandangan kedepan atau tanggapan terhadap isu yang telah diteliti.
- Referensi yang digunakan baik, dengan menggunakan 25 literatur yang 19 diantaranya bersumber artikel jurnal. Namun terdapat 8 literatur yang digunakan telah diterbitkan lebih dari 10 tahun yang lalu.
- Jurnal bereputasi internasional, terindeks Scopus Q3. Similarity index Turnitin 7%.

Semarang, 27 Mei 2021
Reviewer 1,



Wido Prananing Tyas, ST, MDP, Ph.D
NIP. 197301121998032001
Departemen PWK FT. Undip

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

Judul karya ilmiah (artikel) : The Built Environment and its Impact on Transit based Transportation Users Walking Activity in Semarang, Indonesia.

Jumlah Penulis : 3 Penulis

Status Pengusul : Penulis Utama* (Anita Ratnasari Rakhmatulloh *, **Diah Intan Kusumo Dewi**; Dinar Mutiara Kusumo Nugraheni)

Identitas Jurnal Ilmiah : a. Nama Jurnal : Pertanika Journal of Science & Technology
b. Nomor ISSN : ISSN 0128-7680; e-ISSN 2231-8526
c. Vol.,no.,bulan,tahun : 29., 2., April., 2021
d. Penerbit : UPM Press Pertanika Malaysia
e. DOI artikel : <https://doi.org/10.47836/pjst.29.2.05>
f. Alamat web jurnal : <http://www.pertanika.upm.edu.my/pjst/browse/regular-issue>
g. Terindeks di : DOAJ, Google Scholar, Scopus

Kategori Publikasi Jurnal Ilmiah (beri ✓ pada kategori yang tepat)

☒	: Jurnal Ilmiah Internasional /internasional bereputasi
☐	: Jurnal Ilmiah Nasional Terakreditasi
☐	: Jurnal Ilmiah Nasional /Nasional di DOAJ, Google Scholar

Hasil Penilaian *Peer Review* :

Komponen Yang Dinilai	Nilai Reviewer		
	Reviewer I	Reviewer II	Nilai Rata-rata
a. Kelengkapan unsur isi artikel (10%)	3	4	3,5
b. Ruang lingkup dan kedalaman pembahasan (30%)	10	10	10
c. Kecukupan dan kemutakhiran data/informasi dan metodologi (30%)	10	10	10
d. Kelengkapan unsur dan kualitas terbitan/jurnal (30%)	11	11	11
Total = (100%)			34,5

Semarang, 27 Juli 2021

Reviewer 1,

Reviewer 2,

Dr. Ir. Rina Kurniati, M.T.
NIP. 19660822 199702 2 001
Departemen PWK, FT. UNDIP

Wido Prananing Tyas, ST, MDP, Ph.D
NIP. 197301121998032001
Departemen PWK, FT. UNDIP



< Back to results | < Previous 2 of 16 Next >

↗ Export ↴ Download 🖨 Print ✉ E-mail 📄 Save to PDF ☆ Add to List More... >

View at Publisher|

Document type

Article

Source type

Journal

ISSN

01287680

DOI

10.47836/pjst.29.2.05

View more ▾

Pertanika Journal of Science and Technology • Open Access • Volume 29, Issue 2, Pages 771 - 789 • 2021

The built environment and its impact on transit based transportation users walking activity in semarang, indonesia

Rakhmatulloh A.R.^a ✉ , Dewi D.I.K.^a ✉ , Nugraheni D.M.K.^b ✉

📁 Save all to author list

^a Department of Urban and Regional Planning, Faculty of Engineering, Diponegoro University, Semarang, Prof. Soedarto, Tembalang, Semarang, 50275, Indonesia

^b Department of Computer Science, Faculty of Science and Mathematics, Diponegoro University, Semarang, Prof. Soedarto, Tembalang, Semarang, 50275, Indonesia

Abstract

Author keywords

SciVal Topics

Metrics

Funding details

Abstract

The increase in mobility rate due to the current rise in population has become a challenge in urban development. This led to the development of pedestrian walkways, which are integrated with transit-based transportation, to minimize problems due to the high level of mobility of the urban population. According to some experts, environmental conditions are one of the main factors capable of affecting pedestrians' frequency. Therefore, this study explores the effect of the built environment, such as density, diversity, and design, on the pedestrian frequency of the Bus Trans Semarang passengers. Data were collected from 9 corridors, consisting of 447 bus stops, directly connected to the pedestrian walkways, as one of the feeders for transit-based transportation facilities. The analysis method used for each variable was the formulation technique, with data simulated using various applications, such as ArcGIS. The linear regression partial t-test model was also analyzed using SPSS, with the effect of pedestrian frequency on dependent variables determined, using the built environment elements (independent variable). The results showed a positive significance between the diversity variable and

Cited by 0 documents

Inform me when this document is cited in Scopus:

Set citation alert >

Related documents

Can Building Density Influence the Amount of BRT Trans Semarang Ridership?

Oktaviani, I. , Dewi, D.I.K. , Rakhmatulloh, A.R. (2020) *IOP Conference Series: Earth and Environmental Science*

The central-mid-levels escalator as Urban regenerator in Hong Kong

Zacharias, J. (2013) *Journal of Urban Design*

A procedure using GIS to analyze the access by non-motorized transport to transit stations

Monteiro, F.B. , Campos, V.B.G. (2013) *Lecture Notes in Geoinformation and Cartography*

View all related documents based on references

Find more related documents in Scopus based on:

Authors > Keywords >

Source details

Pertanika Journal of Science and Technology

Scopus coverage years: from 2010 to Present

Publisher: Universiti Putra Malaysia

ISSN: 0128-7680

Subject area: [Agricultural and Biological Sciences: General Agricultural and Biological Sciences](#)

[Environmental Science: General Environmental Science](#)

[Computer Science: General Computer Science](#)

[Chemical Engineering: General Chemical Engineering](#)

Source type: Journal

CiteScore 2020 [ⓘ](#)
1.1

SJR 2020 [ⓘ](#)
0.174

SNIP 2020 [ⓘ](#)
0.405

[View all documents >](#) [Set document alert](#) [📁 Save to source list](#)

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

i Improved CiteScore methodology ✕

CiteScore 2020 counts the citations received in 2017-2020 to articles, reviews, conference papers, book chapters and data papers published in 2017-2020, and divides this by the number of publications published in 2017-2020. [Learn more >](#)

CiteScore 2020 ⌵

1.1 = $\frac{890 \text{ Citations 2017 - 2020}}{806 \text{ Documents 2017 - 2020}}$

Calculated on 05 May, 2021

CiteScoreTracker 2021 [ⓘ](#)

1.2 = $\frac{573 \text{ Citations to date}}{493 \text{ Documents to date}}$

Last updated on 04 July, 2021 • Updated monthly

CiteScore rank 2020 [ⓘ](#)

Category	Rank	Percentile
Agricultural and Biological Sciences	#111/209	47th
General Agricultural and Biological Sciences		
Environmental Science	#140/220	36th
General Environmental Science		

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

EN

[HOME](#)
[ABOUT THE JOURNAL](#)
[BROWSE JOURNAL](#)
[SUBMISSION](#)
[REVIEWERS](#)
[INFORMATION](#)
[CONTACT US](#)

PRESENTER

HOW TO GET PUBLISHED IN PERTANIKA JOURNAL OF SCIENCE TECHNOLOGY: SOME TIPS

21TH JULY 2021
2.30 PM - 4.30 PM

REGISTRATION LINK:
Please refer to Webinar page

Dr. Mohammad Jawaid
Chief Executive Editor

Prof. Dr. Luqman Chuah Abdullah
Editor-in-Chief

Assoc. Prof. Dr. Nazmi Mat Nawi
Head, Laboratory of Plantation System Technology & Mechanization, Institute of Plantation Studies & Faculty of Engineering, UPM



Information Links

[Scopes](#)
[Processing Time](#)
[Editorial Board Member \(EBM\)](#)
[Submission](#)
[Publication Charge](#)
[Scam Alert](#)
[Become a Reviewer](#)
[Call for Papers](#)

Latest in Regular Issue

[Journal of Science & Technology Vol. 29 \(2\) Apr 2021](#)

Numerical Analysis of the Crack Inspections Using Hybrid Approach for the Application the Circular Cantilever Rods

Saddam Hussein Raheemah, Kareem Idan Fadheel, Qais Hussein Hassan, Ashham Mohammed Aneel, Alaa Abdulazeez Turki Al-Taie and Hussein Kadhim Sharaf



Pertanika Journal of Science and Technology



Latest in Special Issue

[Journal of Science & Technology Vol. 28 \(S1\) 2020](#)

Investigation on the Suitability of Natural Gas Hydrate Formation Prediction Simulation Packages and its Implementation Conditions

Firas Basim Ismail Alnaimi, Henry Chee Liang Lim, Amar Sahed, Hikmat S. Al Salim and Mohammad Shakir Nasif



Counter Tracker

47792

JST Articles Viewed

43624

JST Articles Downloaded

CONTACT US

The Chief Executive Editor

Pertanika Editorial Office,
Bangunan Putra Science Park 1st Floor

QUICKLINKS

[Publisher - UPM Press](#)
[Deputy Vice Chancellor \(R&I\)](#)

UPM JOURNALS

[ALAMCIPTA](#) [MJMS](#)
[IFRJ](#) [PJSRR](#)

EN



Bangunan Putra Science Park, 1st Floor,
IDEA Tower II, UPM-MTDC Technology Centre,
Universiti Putra Malaysia,
43400 Serdang, Selangor, Malaysia.

Tel: + 603 9769 1622

Email: executive_editor.pertanika@upm.edu.my

Sultan Abdul Samad Library UPM
UPM Homepage

[IJEM](#)

[MAHAWANGSA](#)

[MJMHS](#)

[ASJ](#)



This work is licensed under a [Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License](#).

Copyright© 2011-2021 Universiti Putra Malaysia | This Website is best viewed with Google Chrome, IE8 or above and any Mobile Web Browser

Last Updated: 29 July 2021

EDITORIAL BOARD MEMBER (EBM)



Although in recent years the peer review process has attracted some criticism, it remains the only widely accepted method for research validation and a cornerstone of the scientific publishing process.

Pertanika, like most scientific journals, relies on effective peer review processes to uphold not only the quality and validity of individual articles, but also the overall integrity of the journal.

Editor-in-Chief

Luqman Chuah Abdullah (Prof. Dr.)

Chemical Engineering

Universiti Putra Malaysia, Malaysia

Chief Executive Editor

Mohammad Jawaid (Dr.)

Material Science: Polymer composites, Hybrid Composites, Biopolymers, Nanocomposites, Natural fibres

Universiti Putra Malaysia, Malaysia

Associate Editor

Saidur Rahman (Prof. Dr.)

Renewable Energy, Nanofluids, Energy Efficiency, Heat Transfer, Energy Policy

Sunway University, Malaysia

Editors

Abdul Latif Ahmad (Prof. Ir. Dr.)

Chemical Engineering

Universiti Sains Malaysia, Malaysia.

Adem Kilicman (Prof. Dr.)

Mathematical Sciences

Universiti Putra Malaysia, Malaysia.

Ahmad Zaharin Aris (Prof. Dr.)

Hydrochemistry, Environmental Chemistry, Environmental Forensics, Heavy Metals
Universiti Putra Malaysia, Malaysia.

Azlina Harun@Kamaruddin (Prof. Datin Dr.)

Enzyme Technology, Fermentation Technology

Universiti Sains Malaysia, Malaysia.

Bassim H. Hameed (Prof. Dr.)

Chemical Engineering: Reaction Engineering, Environmental Catalysis & Adsorption
Qatar University, Qatar.

Biswajeet Pradhan (Prof. Dr.)

Digital image processing, Geographical Information System (GIS), Remote Sensing
University of Technology Sydney, Australia.

Daud Ahmad Israf Ali (Prof. Dr.)

Cell Biology, Biochemical, Pharmacology

Universiti Putra Malaysia, Malaysia.

Hari M. Srivastava (Prof. Dr.)

Mathematics and Statistics
University of Victoria, Canada.

Ho Yuh-Shan (Prof. Dr.)

Water research, Chemical Engineering and Environmental studies
Asia University, Taiwan.

Hsiu-Po Kuo (Prof. Dr.)

Chemical Engineering

National Taiwan University, Taiwan.

Ivan D. Rukhlenko (Prof. Dr.)

Nonlinear Optics, Silicon Photonics Plasmonics and Nanotechnology
The University of Sydney, Australia.

Lee Keat Teong (Prof. Dr.)

Energy Environment, Reaction Engineering, Waste Utilization, Renewable Energy
Universiti Sains Malaysia, Malaysia.

Mohamed Othman (Prof. Dr.)

Communication Technology and Network, Scientific Computing

Universiti Putra Malaysia, Malaysia.

Mohd Sapuan Salit (Prof. Dr.)

Concurrent Engineering and Composite Materials
Universiti Putra Malaysia, Malaysia.

Mohd Shukry Abdul Majid (Assoc. Prof. Ir. Dr.)

Polymer Composites, Composite Pipes, Natural Fibre Composites, Biodegradable Composites, Bio-Composites
Universiti Malaysia Perlis, Malaysia

Mohd Zulfahri Abdullah (Prof. Dr.)

Mohd Ali Hassan (Prof. Dr.)

Mohd Fauzi Dami Chuan (Prof. Dr.)

EN



Mohd Zulkifly Abdullah (Prof. Ir. Dr.)

Fluid Mechanics, Heat Transfer, Computational Fluid Dynamics (CFD)

Universiti Sains Malaysia, Malaysia

Mohd. Ali Hassan (Prof. Dr.)

Bioprocess Engineering, Environmental Biotechnology

Universiti Putra Malaysia, Malaysia.

Najafpour Darzi Ghasem (Prof. Dr.)

Bioprocess Technology, Chemical Engineering, Water and Wastewater Treatment Technology, Biochemical Engineering and Biotechnology, Bioethanol, Biofuel, Biohydrogen, Enzyme and Fermentation Technology

Babol Noshirvani University of Technology, Iran.

Nor Azah Yusof (Prof. Dr.)

Biosensors, Chemical Sensor, Functional Material
Universiti Putra Malaysia, Malaysia.

Norbahiah Misran (Prof. Dr.)

Communication Engineering
Universiti Kebangsaan Malaysia, Malaysia.

Roslan Abd-Shukor (Prof. Dato' Dr.)

Physics & Materials Physics, Superconducting Materials

Universiti Kebangsaan Malaysia, Malaysia.

Wing Keong Ng (Prof. Dr.)

Aquaculture, Aquatic Animal Nutrition, Aqua Feed Technology

Universiti Sains Malaysia, Malaysia.

Previous Years

2020 2019 2018 2017 2016 2015 2014 2013 2012 2011 2010 2009 2008 2007 2006 2005 2004 2003 2002 2001
2000 1999 1998 1997 1996 1995 1994 1993

CONTACT US

The Chief Executive Editor

Pertanika Editorial Office,
Bangunan Putra Science Park, 1st Floor,
IDEA Tower II, UPM-MTDC Technology Centre,
Universiti Putra Malaysia,
43400 Serdang, Selangor, Malaysia.

Tel: + 603 9769 1622

Email: executive_editor.pertanika@upm.edu.my

QUICKLINKS

Publisher - UPM Press
Deputy Vice Chancellor (R&I)
Sultan Abdul Samad Library UPM
UPM Homepage

UPM JOURNALS

ALAMCIPTA	MJMS
IFRJ	PJSRR
IJEM	MAHAWANGSA
MJMHS	ASJ



This work is licensed under a [Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License](#).

Copyright© 2011-2021 Universiti Putra Malaysia | This Website is best viewed with Google Chrome, IE8 or above and any Mobile Web Browser

Last Updated: 29 July 2021

Pertanika Journal of Science & Technology

REGULAR ISSUE

Browse Issue

Decade Year Issue



PJST Vol. 29 (2) Apr.
2021

ISSN 0128-7680
e-ISSN 2231-8526

PJST Vol. 29 (2) Apr. 2021

Download latest complete journal – [PJST Vol. 29 \(2\) Apr. 2021](#)

Articles

- High Level Synthesis Optimizations of Road Lane Detection Development on Zynq-7000**

Panadda Solod, Nattha Jindapetch, Kiattisak Sengchui, Apidet Booranawong, Pakpoom Hoyingcharoen, Surachate Chumpol and Masami Ikura

<https://doi.org/10.47836/pjst.29.2.01>

[Full Article](#)
(Downloads: 419)

[Abstract](#)
(Viewed: 537)
- Farmers' Participation in Irrigation Management in the Punggur Utara Irrigation Area, Indonesia**

Dyah Indriana Kusumastuti, Vera Chania Putri, Dwi Jokowinarno and Endro Prasetyo Wahono

<https://doi.org/10.47836/pjst.29.2.02>

[Full Article](#)
(Downloads: 129)

[Abstract](#)
(Viewed: 320)
- Pseudo-colour with K-means Clustering Algorithm for Acute Ischemic Stroke Lesion Segmentation in Brain MRI**

Abang Mohd Arif Anaqi Abang Isa, Kuryati Kipli, Ahmad Tirmizi Jobli, Muhammad Hamdi Mahmood, Siti Kudnie Sahari, Aditya Tri Hernowo and Sinin Hamdan

<https://doi.org/10.47836/pjst.29.2.03>

[Full Article](#)
(Downloads: 113)

[Abstract](#)
(Viewed: 437)
- Improved High Dynamic Range for 3D Shape Measurement based on Saturation of the Coloured Fringe**

Shanyu Chua, Chee Chin Lim¹, Swee Kheng Eng, Yen Fook Chong and Chiun Tai Loh

<https://doi.org/10.47836/pjst.29.2.04>

[Full Article](#)
(Downloads: 70)

[Abstract](#)
(Viewed: 263)
- The Built Environment and its Impact on Transit based Transportation Users Walking Activity in Semarang, Indonesia**

Anita Ratnasari Rakhmatulloh, Diah Intan Kusumo Dewi and Dinar Mutiara Kusumo Nugraheni

<https://doi.org/10.47836/pjst.29.2.05>

[Full Article](#)
(Downloads: 78)

[Abstract](#)
(Viewed: 298)
- Ethylene Yield from a Large Scale Naphtha Pyrolysis Cracking Utilizing Response Surface Methodology**

Mohamad Hafizi Zakria, Mohd Ghazali Mohd Nawawi¹ and Mohd Rizal Abdul Rahman

<https://doi.org/10.47836/pjst.29.2.06>

[Full Article](#)
(Downloads: 63)

[Abstract](#)
(Viewed: 286)

-
7. Smartphone Application Development for Rice Field Management Through Aerial Imagery and Normalised Difference Vegetation Index (NDVI) Analysis  [Full Article](#)
(Downloads: 84)
 [Abstract](#)
(Viewed: 403)
Nor Athirah Roslin, Nik Norasma Che'Ya, Rhushalshafira Rosle and Mohd Razi Ismail
<https://doi.org/10.47836/pjst.29.2.07>
-
8. A Review Article on Software Effort Estimation in Agile Methodology  [Full Article](#)
(Downloads: 98)
 [Abstract](#)
(Viewed: 324)
Pantjawati Sudarmaningtyas and Rozlina Mohamed
<https://doi.org/10.47836/pjst.29.2.08>
-
9. Reducing Cognitive Impairment Among Dementia Users Through Mobile Application  [Full Article](#)
(Downloads: 51)
 [Abstract](#)
(Viewed: 262)
Nur Atheera Mohd Hassan, Aslina Baharum, Zaidatul Haslinda Abdullah Sani, Kent Chau and Noorsidi Aizuddin Mat Noor
<https://doi.org/10.47836/pjst.29.2.09>
-
10. Photonics Rib Waveguide Dimension Dependent Charge Distribution and Loss Characterization  [Full Article](#)
(Downloads: 39)
 [Abstract](#)
(Viewed: 266)
Angie Teo Chen Chen, Mohammad Rakib Uddin and Foo Kui Law
<https://doi.org/10.47836/pjst.29.2.10>
-
11. Optimizing Placement of Field Experience Program: An Integration of MOORA and Rule-Based Decision Making  [Full Article](#)
(Downloads: 51)
 [Abstract](#)
(Viewed: 245)
Okfalisa Okfalisa, Rizka Hafsari, Gusman Nawanir, Saktioto Toto and Novi Yanti
<https://doi.org/10.47836/pjst.29.2.11>
-
12. Assessing Malaysian University English Test (MUET) Essay on Language and Semantic Features Using Intelligent Essay Grader (IEG)  [Full Article](#)
(Downloads: 45)
 [Abstract](#)
(Viewed: 268)
Wee Sian Wong and Chih How Bong
<https://doi.org/10.47836/pjst.29.2.12>
-
13. Artificial Neural Network Intelligent System on the Early Warning System of Landslide  [Full Article](#)
(Downloads: 66)

EN



16. Robust Multivariate Correlation Techniques: A Confirmation Analysis using Covid-19 Data Set

Friday Zinzendoff Okwonu, Nor Aishah Ahad, Joshua Sarduana Apanapudor and Festus Irismisose Arunaye

<https://doi.org/10.47836/pjst.29.2.16>

 [Full Article](#)

(Downloads: 41)

 [Abstract](#)

(Viewed: 247)

17. Generalized Fibonacci Search Method in One-Dimensional Unconstrained Non-Linear Optimization

Chin Yoon Chong, Soo Kar Leow and Hong Seng Sim

<https://doi.org/10.47836/pjst.29.2.17>

 [Full Article](#)

(Downloads: 38)

 [Abstract](#)

(Viewed: 272)

18. Mathematical Modeling and Availability Analysis of Leaf Spring Manufacturing Plant

Sohan Lal Tyagi, Shikha Bansal, Priyanka Agarwal and Ajay Singh Yadav

<https://doi.org/10.47836/pjst.29.2.18>

 [Full Article](#)

(Downloads: 32)

 [Abstract](#)

(Viewed: 208)

19. Penalized LAD-SCAD Estimator Based on Robust Wrapped Correlation Screening Method for High Dimensional Models

Ishaq Abdullahi Baba, Habshah Midi, Leong Wah June and Gafurjan Ibragimov

<https://doi.org/10.47836/pjst.29.2.19>

 [Full Article](#)

(Downloads: 28)

 [Abstract](#)

(Viewed: 233)

EN



25. Assessment by Simulation of Different Topological Integration of Solar Photovoltaic Plant in Medium Voltage Distribution Networks

Md. Milon Uddin, Mushfiquir Rahman, Md. Tanzid Ridwan Hossain and Md. Habibur Rahman

<https://doi.org/10.47836/pjst.29.2.25>

 [Full Article](#)

(Downloads: 24)

 [Abstract](#)

(Viewed: 266)

-
26. Volume Transport Variability in the Western Equatorial Pacific and

 [Full Article](#)

EN



High Level Synthesis Optimizations of Road Lane Detection Development on Zynq-7000

Panadda Solod^{1*}, Nattha Jindapetch¹, Kiattisak Sengchuai¹, Apidet Booranawong¹, Pakpoom Hoyingcharoen¹, Surachate Chumpol² and Masami Ikura²

¹*Department of Electrical Engineering, Faculty of Engineering, Prince of Songkla University, Hat Yai, Songkhla 90112, Thailand*

²*Toyota Tsusho Nexty Electronics (Thailand) co, Ltd Bangkok, Thailand*

ABSTRACT

In this work, we proposed High-Level Synthesis (HLS) optimization processes to improve the speed and the resource usage of complex algorithms, especially nested-loop. The proposed HLS optimization processes are divided into four steps: array sizing is performed to decrease the resource usage on Programmable Logic (PL) part, loop analysis is performed to determine which loop must be loop unrolling or loop pipelining, array partitioning is performed to resolve the bottleneck of loop unrolling and loop pipelining, and HLS interface is performed to select the best block level and port level interface for array argument of RTL design. A case study road lane detection was analyzed and applied with suitable optimization techniques to implement on the Xilinx Zynq-7000 family (Zybo ZC7010-1) which was a low-cost FPGA. From the experimental results, our proposed method reaches 6.66 times faster than the primitive method at clock frequency 100 MHz or about 6 FPS. Although the proposed methods cannot reach the standard real-time (25 FPS), they can instruct HLS developers for speed increasing and resource decreasing on an FPGA.

ARTICLE INFO

Article history:

Received: 21 September 2020

Accepted: 30 December 2020

Published: 30 April 2021

DOI: <https://doi.org/10.47836/pjst.29.2.01>

E-mail addresses:

6010120066@psu.ac.th (Panadda Solod)

nattha.s@psu.ac.th (Nattha Jindapetch)

ak.kiattisak@hotmail.com (Kiattisak Sengchuai)

bapidet@eng.psu.ac.th (Apidet Booranawong)

hpakpoom@eng.psu.ac.th (Pakpoom Hoyingcharoen)

surachate@th.nexty-ele.com (Surachate Chumpol)

ikura@th.nexty-ele.com (Masami Ikura)

* Corresponding author

Keywords: Array partitioning, FPGA, high level synthesis (HLS), HLS interface, loop pipelining, loop unrolling

INTRODUCTION

Advanced Driving Assistant Systems (ADAS) are enhanced self-driving in autonomous driving cars. There are many sub-systems in ADAS, such as Lane Keeping Assistant System (LKAS) and

Photonics Rib Waveguide Dimension Dependent Charge Distribution and Loss Characterization

Angie Teo Chen Chen, Mohammad Rakib Uddin* and Foo Kui Law

Electrical and Electronic Engineering Programme Area, Faculty of Engineering, Universiti Teknologi Brunei, BE1410 Brunei Darussalam

ABSTRACT

The simulation of behaviour of the charge distribution and the loss characteristic for rib-waveguide is demonstrated by using silicon-on-insulator (SOI). In this simulation, the rib waveguide is designed at a core width of 450nm, core height of 250nm, rib height of 50nm and buried oxide height of 100nm. These dimensions are set as reference. The aspiration of designing rib waveguide instead of other type of waveguide such as ridge waveguide is from the higher light confinement that can be accomplished by rib waveguide as the refractive index difference is huge and the designing of an active device can be realized. In this analysis, free carrier-injection effect was implemented in the first part of the simulation to study the distribution charges of rib-based waveguide structure based on basic dimensions. In this analysis, electrical voltage was varied from 0V to 1.2V in steps of 0.2V for the analysis of distribution of electron. In the second part of the simulation, four design parameters had been amended which included the core width and height, rib height and buried oxide height. Physical dimensions of the waveguide were altered to achieve smaller device footprint with optimized performance affecting large Free Spectral Range (FSR) and high Q-factor. With proper waveguide physical dimensions design, a good performance Micro-Ring Resonator (MRR) exhibits the principles of wide FSR and Q-factor can be achieved.

ARTICLE INFO

Article history:

Received: 28 September 2020

Accepted: 06 January 2021

Published: 30 April 2021

DOI: <https://doi.org/10.47836/pjst.29.2.10>

E-mail addresses:

angie_teo236@hotmail.com (Angie Teo Chen Chen)

rakib.uddin@utb.edu.bn (Mohammad Rakib Uddin)

p20171002@student.utb.edu.bn (Foo Kui Law)

* Corresponding author

Keywords: Carrier injection; distribution of free charges; physical dimensions; rib-based waveguide structure

INTRODUCTION

In the past ten years, silicon photonics have become well known as an encouraging technology for the integration of optical

Performance Evaluation of Different Membership Function in Fuzzy Logic Based Short-Term Load Forecasting

Oladimeji Ibrahim^{1,2*}, Waheed Olaide Owonikoko¹, Abubakar Abdulkarim³, Abdulrahman Okino Otuoze¹, Mubarak Akorede Afolayan¹, Ibrahim Sani Madugu⁴, Mutiu Shola Bakare¹ and Kayode Elijah Adedayo^{1,5}

¹*Department of Electrical and Electronics Engineering, University of Ilorin, 240103 Ilorin, Nigeria*

²*Department of Electrical and Electronics Engineering, Universiti Teknologi PETRONAS, Bandar Seri Iskandar, 32610 UTP, Perak, Malaysia*

³*Department of Electrical Engineering, Ahmadu Bello University, Zaria, Nigeria*

⁴*Department of Electrical Engineering, Kano University of Science & Technology Wudil, Nigeria*

⁵*Department of Electrical and Electronics Education, Kwara State College of Education (Technical) Lafiagi, Nigeria*

ABSTRACT

A mismatch between utility-scale electricity generation and demand often results in resources and energy wastage that needed to be minimized. Therefore, the utility company needs to be able to accurately forecast load demand as a guide for the planned generation. Short-term load forecast assists the utility company in projecting the future energy demand. The predicted load demand is used to plan ahead for the power to be generated, transmitted, and distributed and which is crucial to power system reliability and economics. Recently, various methods from statistical, artificial intelligence, and hybrid methods have been widely used for load forecasts with each having their merits and drawbacks. This paper

investigates the application of the fuzzy logic technique for short-term load forecast of a day ahead load. The developed fuzzy logic model used time, temperature, and historical load data to forecast 24 hours load demand. The fuzzy models were based on both the trapezoidal and triangular membership function (MF) to investigate their accuracy and effectiveness for the load forecast. The obtained low Mean Absolute Percentage Error (MAPE), Mean Forecast Error (MFE), and Mean Absolute Deviation

ARTICLE INFO

Article history:

Received: 28 March 2020

Accepted: 27 July 2020

Published: 30 April 2021

DOI: <https://doi.org/10.47836/pjst.29.2.14>

E-mail addresses:

ibrahim.o@unilorin.edu.ng (Oladimeji Ibrahim)
waheedowonikoko@gmail.com (Waheed Olaide Owonikoko)
abkzarewa@yahoo.com (Abubakar Abdulkarim)
otuoze.ao@gmail.com (Abdulrahman Okino Otuoze)
mubakorede@yahoo.com (Mubarak Akorede Afolayan)
maduguemir@gmail.com (Ibrahim Sani Madugu)
bkjashola@gmail.com (Mutiu Shola Bakare)
kayodeelijah@yahoo.com (Kayode Elijah Adedayo)

* Corresponding author