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

Judul Karya Ilmiah (Prosiding) : Mobile Measurement System of Ozone Concentration in Urban Areas

Nama/ Jumlah Penulis : 2 Orang
Status Pengusul : ~~Penulis pertama~~/ Penulis ke 2 /~~ Penulis Korespondesi **~~
Identitas Prosiding :
a. Judul Prosiding : 2018 Third International Conference on Informatics and Computing (ICIC)
b. ISBN/ISSN : 978-1-5386-6921-1
c. Thn Terbit, Tempat Pelaks. : 01 August 2019 , 17-18 Oct. 2018 di Palembang
d. Penerbit/Organiser : IEEE publisher
e. Alamat Repository/Web : https://ieeexplore.ieee.org/document/8780449
Alamat Artikel : https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwjI6Irlitj-AhVR-jgGHZAGAvMQFnoECAgQAQ&url=https%3A%2F%2Fdoc-pak.undip.ac.id%2F691%2F1%2FC23.pdf&usg=AOvVaw1xMuvO_X65lUl4gLZSqXi
f. Terindeks di (jika ada) : Scopus

Kategori Publikasi Makalah (beri ✓pada kategori yang tepat) : [√] *Prosiding* Forum Ilmiah Internasional
[ ] *Prosiding* Forum Ilmiah Nasional

Hasil Penilaian *Peer Review* :

Komponen Yang Dinilai	Nilai Maksimal Prosiding		Nilai Akhir Yang Diperoleh
	Internasional [√]	Nasional [ ]	
a. Kelengkapan unsur isi prosiding (10%)	3	3	3
b. Ruang lingkup dan kedalaman pembahasan (30%)	8,9	8,9	8,9
c. Kecukupan dan kemutahiran data/informasi dan metodologi (30%)	8,8	8,9	8,85
d. Kelengkapan unsur dan kualitas terbitan /prosiding (30%)	8,9	8,9	8,9
Total = (100%)	**29,6**	**29,7**	**29,65**
Nilai Pengusul = 40% x 29,65 = 11,86			

Catatan Penilaian Paper oleh Reviewer :

1. **Kesesuaian dan kelengkapan unsur isi prosiding:**

Artikel telah ditulis seuai dengan format **IEEE *Xplore***. *Unsur-unsur artikel lengkap.*

2. **Ruang lingkup dan kedalaman pembahasan:**

Substansi artikel sesuai dengan ruang lingkup jurnal yang diberikan oleh **2018 Third International Conference on Informatics and Computing (ICIC)**). *Perangkat murah berteknologi masa kini telah dibuat. Pengukuran yang dihasilakn cukup akurat*

3. **Kecukupan dan kemutakhiran data/informasi dan metodologi:**

Data-data hasil penelitian adalah data dengan metode yang sedang trends saat ini, hasil menunjukkan data pengukuran lingkungan saat ini jadi ada kebaruan informasi. Terdapat kesesuain pustaka dengan tema penelitian dan sumber pustaka rata-rata relative baru, sehingga aspek keterbaruannya cukup baik

4. **Kelengkapan unsur dan kualitas terbitan/ prosiding:**

Kualitas penerbitan cukup baik.. Paper berasal dari konferensi dimuat di IEEE Xplore, terindeks Scopus, Nilai maximum 30.

Semarang, 10 Mei 2023

Reviewer 1

Prof. Dr. Kusworo Adi, S.Si., M.T.
NIP. 197203171998021001
Unit Kerja : Fakultas Sains dan Matematika
Bidang Ilmu: Fisika

Reviewer 2

Prof. Dr. Heri Sutanto, S.Si., M.Si.
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Unit Kerja : Fakultas Sains dan Matematika
Bidang Ilmu: Fisika

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e.	Alamat Repository/Web	:	https://ieeexplore.ieee.org/document/8780449
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f.	Terindeks di (jika ada)	:	Scopus

Kategori Publikasi Makalah (beri ✓pada kategori yang tepat) : [√] *Prosiding* Forum Ilmiah Internasional
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Hasil Penilaian *Peer Review* :

Komponen Yang Dinilai	Nilai Maksimal Prosiding		Nilai Akhir Yang Diperoleh
	Internasional [√]	Nasional [ ]	
a. Kelengkapan unsur isi prosiding (10%)	3		3
b. Ruang lingkup dan kedalaman pembahasan (30%)	9		8,9
c. Kecukupan dan kemutahiran data/informasi dan metodologi (30%)	9		8,8
d. Kelengkapan unsur dan kualitas terbitan /prosiding (30%)	9		8,9
Total = (100%)	**30**		**29,6**
Nilai Pengusul = 40% x 29,6 = 11,84			

Catatan Penilaian Paper oleh Reviewer :

1. **Kesesuaian dan kelengkapan unsur isi prosiding:**
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2. **Ruang lingkup dan kedalaman pembahasan:**
Substansi artikel sesuai dengan ruang lingkup jurnal yang diberikan oleh **2018 Third International Conference on Informatics and Computing (ICIC)**). *Perangkat murah berteknologi masa kini telah dibuat. Pengukuran yang dihasilakn cukup akurat*
3. **Kecukupan dan kemutakhiran data/informasi dan metodologi:**
Data-data hasil penelitian adalah data dengan metode yang sedang trends saat ini, hasil menunjukkan data pengukuran lingkungan saat ini jadi ada kebaruan informasi. Terdapat kesesuain pustaka dengan tema penelitian dan sumber pustaka rata-rata relative baru, sehingga aspek keterbaruannya cukup baik
4. **Kelengkapan unsur dan kualitas terbitan/ prosiding:**
Kualitas penerbitan cukup baik.. Paper berasal dari konferensi dimuat di IEEE Xplore, terindeks Scopus, Nilai maximum 30.

Semarang, 5 Mei 2023
Reviewer 1

Prof. Dr. Kusworo Adi, S.Si., M.T.
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Bidang Ilmu: Fisika

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f. Terindeks di (jika ada) : Scopus

Kategori Publikasi Makalah (beri ✓pada kategori yang tepat) : [√] *Prosiding* Forum Ilmiah Internasional

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Hasil Penilaian *Peer Review* :

Komponen Yang Dinilai	Nilai Maksimal Prosiding		Nilai Akhir Yang Diperoleh
	Internasional [√]	Nasional [ ]	
a. Kelengkapan unsur isi prosiding (10%)	3		3
b. Ruang lingkup dan kedalaman pembahasan (30%)	9		8,9
c. Kecukupan dan kemutahiran data/informasi dan metodologi (30%)	9		8,9
d. Kelengkapan unsur dan kualitas terbitan /prosiding (30%)	9		8,9
Total = (100%)	**30**		**29,7**
Nilai Pengusul = 40% x 29,7 = 11,88			

Catatan Penilaian Paper oleh Reviewer :

1. **Kesesuaian dan kelengkapan unsur isi prosiding:**
   Artikel telah ditulis secara lengkap dari judul, abstrak hingga referensi sesuai dengan format penulisan **IEEE *Xplore***. *Topik artikel sesuai scope prosiding.*
2. **Ruang lingkup dan kedalaman pembahasan:**
   Substansi artikel sesuai dengan ruang lingkup **2018 Third International Conference on Informatics and Computing (ICIC)**. *Lingkup artikel terkait system pengukuran konsentrasi ozon di area pemukiman secara mobile. Data pengujian disajikan dalam 2 tabel. Pembahsan sudah dilakukan dnegan baik namun belum merujuk/mambandingkan dengan hasil peneliti lain.*
3. **Kecukupan dan kemutakhiran data/informasi dan metodologi:**
   Data-data hasil penelitian kategori cukup. Metodologi sudah sesuai dengan bidang instrumentasi. Artikel disusun dengan 15 referensi yang relevan dengan topik dan kategori mutakhir.
4. **Kelengkapan unsur dan kualitas terbitan/ prosiding:**
   Kualitas penerbitan cukup baik. Paper berasal dari konferensi dimuat di IEEE Xplore, terindeks Scopus, Nilai maximum 30.

Semarang, 5 Mei 2023
Reviewer 2

Prof. Dr. Heri Sutanto, S.Si., M.Si.
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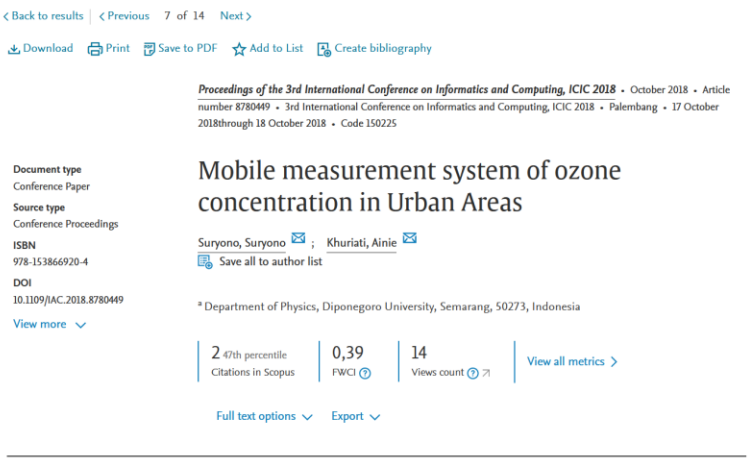

Mobile measurement system of ozone concentration in Urban Areas Full text options Export

Abstract

Ozone concentration significantly affects life quality of the people in an area. Ozone concentration that exceeds certain thresholds in heavily populated areas like most cities may be harmful for health and can even cause death. However, ozone monitoring has only so far been carried out at fixed sampling points using stationary instruments or conducted with manual recording instruments at certain sampling points. These types of measurements cannot represent the whole suburban areas that tend to be wide and populous. This paper proposes a mobile model of measuring ozone concentration with the integration of ozone sensors and Global Positioning System (GPS) sensor circuit. Measured data are acquired by the microprocessor, saved in a data base and analysis results are linked to a web mapping service. Measurements are carried out by encircling the intended urban areas. Results show that data from ozone sensors and measurement coordinates (latitude and longitude) can be stored in the data base and can visually be observed on the web mapping service in the form of spatial distribution of measurement points. Quantities of ozone concentration measurement results for a wide area can be seen on the data base. The system developed here is capable of monitoring environmental condition by acquiring ozone concentration distribution values. © 2018 IEEE.

Author keywords

Concentration; Environment condition; Measurement; Mobile model; Web mapping service

Indexed keywords

Sustainable Development Goals 2023 New

SciVal Topics

Metrics

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1 Çelikler, D., Aksan, Z.
Determination of pre-service elementary science teachers' knowledge level about Ozone Layer (Open Access)
(2011) *Procedia - Social and Behavioral Sciences*, 15, pp. 1438-1444. Cited 6 times.
doi: 10.1016/j.sbspro.2011.03.308
View at Publisher

2 Thin[illegible], W.
View at Publisher(opens in a new window)
UV-B effects on the nutritional chemistry of plants and the responses of a mammalian herbivore
(2008) *Oecologia*, 156 (1), pp. 125-135. Cited 10 times.
doi: 10.1007/s00442-008-0978-1
View at Publisher

3 Bozkurt, O., Aydo, M.
Ozon Tabakasi ve Görevleri
(2004) *Kastamonu Egitim Dergisi*, 12 (2), pp. 369-376. Cited 8 times.

4 Hyttinen, M., Pasanen, P., Kalliokoski, P.
Removal of ozone on clean, dusty and sooty supply air filters
(2006) *Atmospheric Environment*, 40 (2), pp. 315-325. Cited 50 times.
doi: 10.1016/j.atmosenv.2005.09.040
View at Publisher

5 Lippmann, M.
Health Effects Of Ozone A Critical Review (Open Access)
(1989) *Journal of the Air Pollution Control Association*, 39 (5), pp. 672-695. Cited 472 times.
doi: 10.1080/08940630.1989.10466554
View at Publisher

6 Beven, K., Freer, J.
Equifinality, data assimilation, and uncertainty estimation in mechanistic modelling of complex environmental systems using the GLUE methodology
(2001) *Journal of Hydrology*, 249 (1-4), pp. 11-29. Cited 1569 times.
doi: 10.1016/S0022-1694(01)00421-8
View at Publisher

7 Lai, D., Karava, P., Chen, Q.

Study of outdoor ozone penetration into buildings through ventilation and infiltration

(2015) *Building and Environment*, 93 (P2), pp. 112-118. Cited 26 times.
http://www.elsevier.com.proxy.undip.ac.id:2048/inca/publications/store/2/9/6/index.htt
doi: 10.1016/j.buildenv.2015.06.015

View at Publisher

8 Gui, L., Val, T., Wei, A., Dalce, R.

Improvement of range-free localization technology by a novel DV-hop protocol in wireless sensor networks (Open Access)

(2015) *Ad Hoc Networks*, 24 (PB), pp. 55-73. Cited 114 times.
http://www.elsevier.com.proxy.undip.ac.id:2048/inca/publications/store/6/7/2/3/8/0/index.htt
doi: 10.1016/j.adhoc.2014.07.025

View at Publisher

9 Williams, D.E., Salmond, J., Yung, Y.F., Akaji, J., Wright, B., Wilson, J., Henshaw, G.S., (...), Laing, G.

Development of low-cost ozone and nitrogen dioxide measurement instruments suitable for use in an air quality monitoring network

(2009) *Proceedings of IEEE Sensors*, art. no. 5398568, pp. 1099-1104. Cited 18 times.
ISBN: 978-142444548-6
doi: 10.1109/ICSENS.2009.5398568

View at Publisher

10 Derwent, R.G., Parrish, D.D., Galbally, I.E., Stevenson, D.S., Doherty, R.M., Naik, V., Young, P.J.

Uncertainties in models of tropospheric ozone based on Monte Carlo analysis: Tropospheric ozone burdens, atmospheric lifetimes and surface distributions (Open Access)

11 Hayashida, S., Kajino, M., Deushi, M., Sekiyama, T.T., Liu, X.

Seasonality of the lower tropospheric ozone over China observed by the Ozone Monitoring Instrument (Open Access)

(2018) *Atmospheric Environment*, 184, pp. 244-253. Cited 17 times.
www.elsevier.com/locate/atmosenv
doi: 10.1016/j.atmosenv.2018.04.014

View at Publisher

12 Kuttippurath, J., Kumar, P., Nair, P.J., Chakraborty, A.

Accuracy of satellite total column ozone measurements in polar vortex conditions: Comparison with ground-based observations in 1979–2013

(2018) *Remote Sensing of Environment*, 209, pp. 648-659. Cited 13 times.
www.elsevier.com/inca/publications/store/5/0/5/7/3/3
doi: 10.1016/j.rse.2018.02.054

View at Publisher

13 Jakowski, N., Wiken, V., Mayer, C.
Space weather monitoring bt GPS measurement on board CHAMP
(2017) *IEEE*

14 Hongwei, Y., Yi, J.
(2017) *Meximum Likehood Network Localization Using Range Estimation and GPS Measurements*
IEEE.

15 Cai, J., Yu, S.-Z., Liu, J.-L.
The design of a wireless data acquisition and transmission system

(2009) *Journal of Networks*, 4 (10), pp. 1042-1049. Cited 6 times.
http://www.academypublisher.com/ojs/index.php/jnw/article/view/041010421049/1405
doi: 10.4304/jnw.4.10.1042-1049

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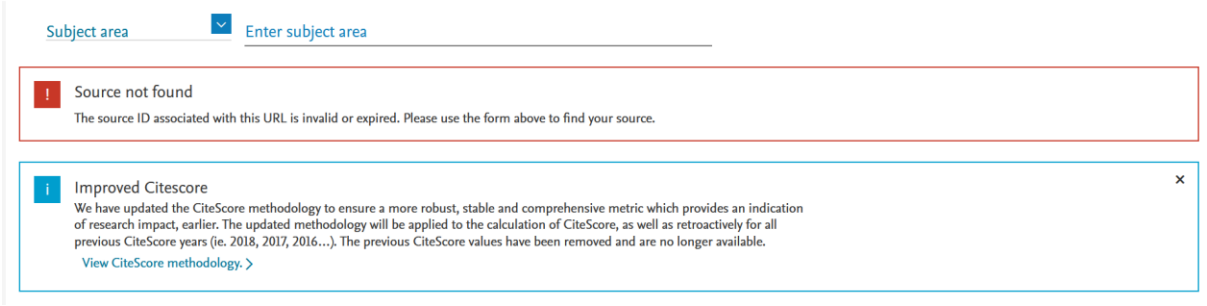
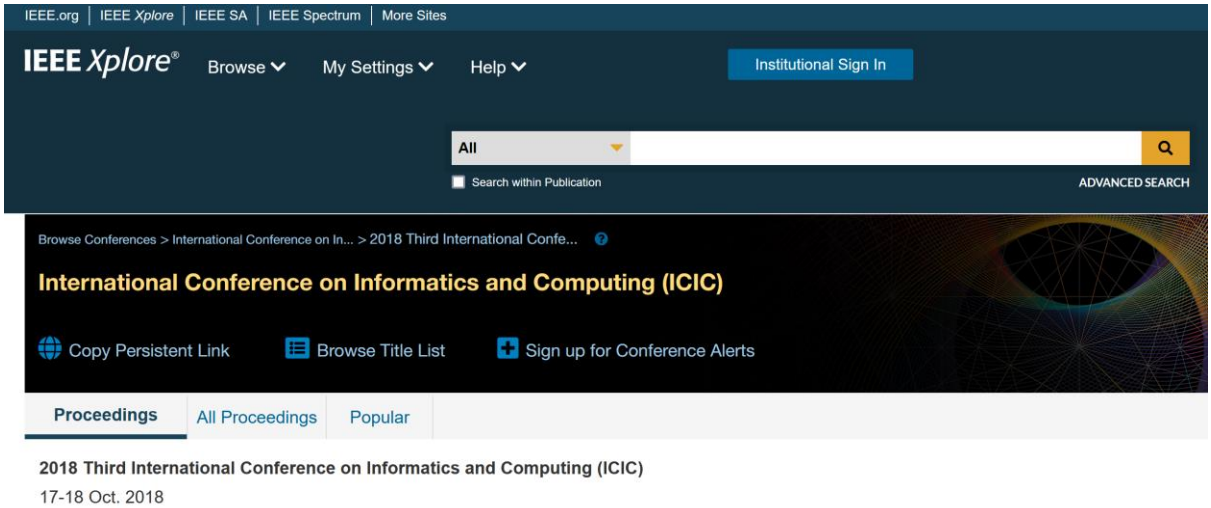
Sources





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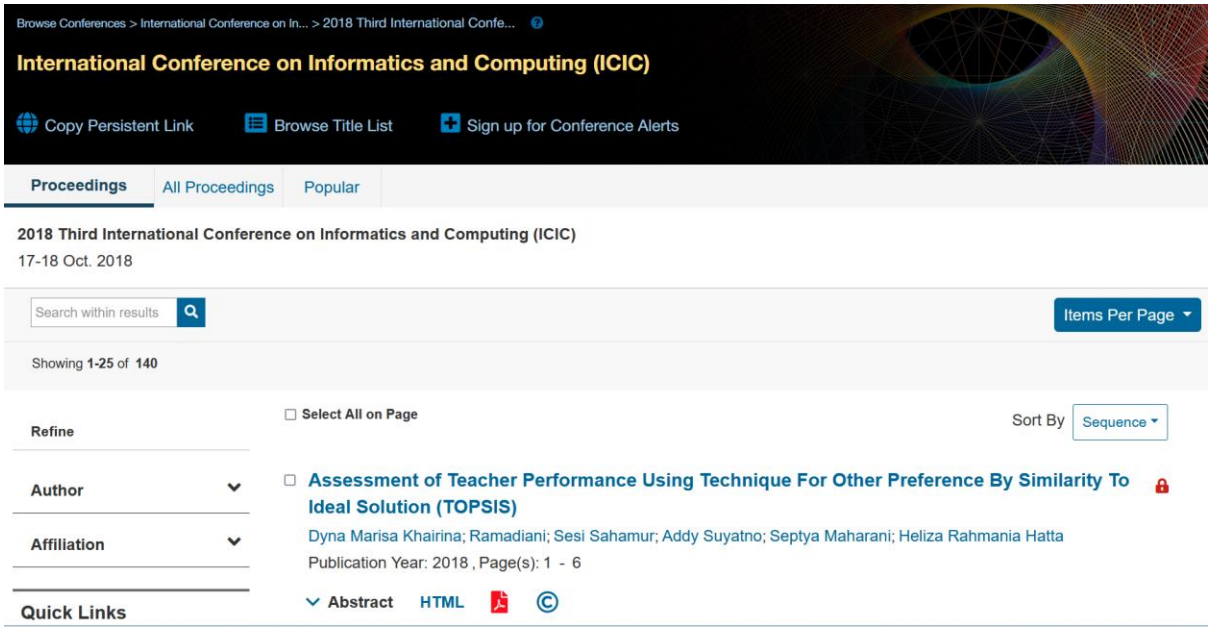

Mel-frequency Cepstral Coefficient-Vector Quantization Implementation for Voice Detection of Rice-Eating Birds in The Rice Fields

Romi Fadillah Rahmat; Tri Ramadhani; Dani Gunawan; Sharfina Faza; Rahmat Budiarto

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Mel-frequency Cepstral Coefficient-Vector Quantization Implementation for Voice Detection of Rice-Eating Birds in The Rice Fields

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Usability Evaluation and Development of a University Staff Website

Publisher: IEEE

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Abstract:

Staff Website of one of big universities in Indonesia is a portal for access and information about lecturers, staff, and researchers in the university. However, the website has not fulfilled its main function. This is because the searching mechanism on the website has not matched the user's expectation, and the interface of the website is not very attractive. This research describes a project to measure the usability and user experience of the Staff Website. The evaluation results show that the website has not reached the required level of usability and user experience. Based on these results we developed an alternative design and formulated a better search mechanism for the website. This research is expected to improve the deficiencies of the Staff Website. System Usability Scale (SUS) was used to measure the usability and User Experience Questionnaire (UEQ) to measure the broader aspect of user experience. In addition, a usability test was done to get qualitative data that could be used to improve the website and especially the search mechanism. The result of this research was a measurement of usability level, design alternative, and formulation of the search mechanism in the Staff Website. From this research, we concluded that the usability of the Staff Website needs improvement, and based on the survey results, it was urgent to generate an alternative design and a searching mechanism such as making an advanced searching mechanism, sorting and filtering buttons, and more. The new design was further evaluated with SUS and UEQ, and the results show that the website has significantly improved.

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Genetic Algorithms with Variable Length Chromosomes for High Constraint Problems in Spatial Data

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Abstract:
Constraint handling is the main task in constrained optimization problems. Variable length chromosomes in the genetic algorithm has been used widely for faster computation, but in this study it was used to handle the constraint as well. This method uses the characteristic of the genetic algorithm with bit-strings conversion from real numbers. By the bit-strings format the population of the candidates can be limited only in the study area where it is impossible when the real number format is used. Therefore, it will reduce the searching area and make the optimization process faster. Variable length chromosomes method can also be integrated with another constraint handling, i.e. the death penalty method. The results showed that the proposed method was able to optimize land use in Bekasi City, Indonesia, as a case study.

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Genetic Algorithms with Variable Length Chromosomes for High Constraint Problems in Spatial Data

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***Abstract*—Constraint handling is the main task in constrained optimization problems. Variable length chromosomes in the genetic algorithm has been used widely for faster computation, but in this study it was used to handle the constraint as well. This method uses the characteristic of the genetic algorithm with bit-strings conversion from real numbers. By the bit-strings format, the population of the candidates can be limited only in the study area where it is impossible when the real number format is used. Therefore, it will reduce the searching area and make the optimization process faster. Variable length chromosomes method can also be integrated with another constraint handling, i.e. the death penalty method. The results showed that the proposed method was able to optimize land use in Bekasi City, Indonesia, as a case study.**

Keywords—constrained-optimization, death penalty, constraint handling, Bekasi City

I. INTRODUCTION

As a robust optimization method, genetic algorithm (GA) has been widely used in many areas. One interesting area is optimizing the geographical data. City planners need an appropriate method to allocated land use properly through a land-use optimization. One challenging problem in land-use optimization is the wide area that involves large number of land uses. For example in Bekasi City, West Java, Indonesia, with its 210.49 km^2 area, 90 percent of its land use are built-up with more than 3000 building that need to be optimized [1]. The current study proposed a modification in GA to make computation faster than the original one.

GA is a stochastic optimization that mimic the evolution of nature [2]. Some terms are similar to biology such as gen, chromosome, allele, mutation, reproduction, selection, etc. The main part of GA is the chromosome that is represented by bit-strings from encoding the real number to binary. After crossover, mutation, and selection, new generations are created that more adaptive than before. This cycle makes GA as the member of evolutionary algorithms with the other methods such as particle swarm optimization (PSO) [3], simulated annealing (SA) [4], [5], and other hybrid methods [6]–[9].

GA involves many algorithms that handle encoding and decoding, crossover, and selection methods that make this algorithms flexible to be modified. Searching area is the main focus of GA optimization since it influence the accuracy (local or global optimum) and speed of optimization process. Therefore, many studies on adding and reducing the searching area have been done by manipulating the length of chromosomes that compatible with the problems, e.g. structural topology design [10], manipulators motion [11], node placement problems [12], path optimization [13], and other implementation of variable length of chromosomes [14].

The rest of the paper is organized as follows. After discussing the optimization problem and the study area, section 2 discusses the optimization methods and constraint handlings. The results are discussed and concluded regarding the benefit of variable length of chromosomes.

II. METHODS

There are two kinds of GA based on the length of chromosomes, i.e. the fixed length and variable length of chromosomes (VLC). This study uses variable length of chromosomes method.

A. Related Works

Many studies on GA with a VLC method. This method changes the length of chromosomes based on its purpose [14]. For example to avoid the local optimum, VLC adds the length of chromosomes. Adding the length of chromosomes will add the searching area and need more computation resources, but ensure the global optimum. In the other hand, lowering the length of chromosomes will reduce the searching area. For example, in the combination design problem, a k-size building block with l size chromosome will require a population size, population size= $2^k \binom{l}{k}$. There are a total of $\binom{l}{k}$ gene combinations of size k, and for each gene combination there are 2^k different allele combinations.

Insertion and deletion are usually implemented to add chromosome length as well as crossover and mutation [15]. For example two parents with different length of chromosomes, e.g. P_1=10001 01101 00111 111|11 11100 and P_2=00110 000|00, by crossover operation at "|" location will