

**LIST OF CONTENT**

**Experimental Study to Reinforce The Weak Subgrade Soil  
For Low-Volume Roads by Coir Geotextile Mats**

D Harinder, S. Shankar  
page 1

**Fluid Inclusion Study of The Tumpangpitu High Sulfidation Epithermal  
Gold Deposit In Banyuwangi District, East Java, Indonesia**

Yu Yu Myaing, Arifudin Idrus, Anastasia Dewi Titisari  
page 8

**Modified Soil-Adjusted Vegetation Index In Multispectral Remote Sensing Data  
for Estimating Tree Canopy Cover Density at Rubber Plantation**

Wenang Anurogo, Muhammad Zainuddin Lubis, Mir'atul Khusna Mufida  
page 15

**A Study On Influence Of Real Municipal Solid Waste Leachate  
On Properties Of Soils In Warangal, India**

Sudheerkumar Yantrapalli, Hari Krishna, Srinivas  
page 25

**Halogen Chemistry of Hydrothermal Micas: a Possible Geochemical  
Tool in Vectoring to Ore for Porphyry Copper-Gold Deposit**

Arifudin Idrus  
page 30

**The Phenomena of Flood Caused by the Seawater Tidal and its Solution for  
the Rapid-growth City: A case study in Dumai City, Riau Province, Indonesia**

Husnul Kausarian, Batara, Dewandra Bagus Eka Putra  
page 39

**Spatial Statistical Analysis for Potential  
Transit Oriented Development (TOD) in Jakarta Metropolitan Region**

Herika Muhamad Taki, Mohamed Mahmoud H. Maatouk  
page 47

**Infiltration Rate of Quarternary Sediment at Rumbio Jaya, Kampar, Riau**

Adi Suryadi, Tiggi Choanji, Desi Wijayanti  
page 57

**Quaternary Sediment Characteristic of Floodplain Area: Study  
Case at Kampar River, Rumbio Area and Surroundings, Riau Province**

Yuniarti Yuskar , Dewandra Bagus Eka Putra, M. Revanda  
page 63

**Publish periodically four times annually**

## **Scope of Journal**

Paper covering the following aspects of Geology, Earth and Planetary Science, Engineering, Environment, and Technology

## **Address of Secretariat and Paper Submitting**

Jl. Kaharuddin Nasution No 113 Marpoyan Damai  
Pekanbaru, Riau 28284 Phone.(0761) 72126 , Fax. 0761-674834  
e-mail: [jgeet@journal.uir.ac.id](mailto:jgeet@journal.uir.ac.id); web: <http://journal.uir.ac.id/index.php/JGEET>

## **EXECUTIVE EDITORIAL ADVISOR**

Prof. Josaphat Tetuko Sri Sumantyo, Ph.D (Japan)  
Prof. Mega F. Rosana, Ph.D (Indonesia)  
Prof. Dr. Abdul Rahim Samsudin (Malaysia)  
Prof. Dr. H. Detri Karya, S.E, M.A (Indonesia)  
Prof. Dr. Ir. H. Sugeng Wiyono, MMT.

## **EDITOR IN CHIEF**

Dr. Eng. Husnul Kausarian B.Sc.(Hons), M.Sc. (Indonesia)

## **JOURNAL MANAGER**

Catur Cahyaningsih B.Sc (Hons) M.Sc.(Indonesia)  
Tiggi Choanji S.T, M.T (Indonesia)

## **EDITORIAL MEMBER**

Dr. Eng. Takahiro Miyazaki (Japan)  
Dr. Evizal Abdul Kadir S.T., M.Eng (Indonesia)  
Dr. Mursyidah, M.Sc. (Indonesia)  
Dr. Anas Puri S.T, M.T (Indonesia)  
Dr. Eng. Muslim, M.T (Indonesia)  
Dr. Emi Sukiyah, ST., MT (Indonesia)  
Dr. Sapari Dwi Hadian, MT (Indonesia)  
Dr. Vijaya Isnaniawardhani, S.T, M.T (Indonesia)  
Good Fried Panggabean, S.T, M.T (Indonesia)  
Katia Nagamine Urata, M.Eng (Brazil)  
Mirza Muhammad Waqar, M.Sc (Pakistan)  
Kageaki Inoue, M.Eng (Japan)  
Yuta Izumi, M.Eng (Japan)  
Joko Widodo, S.Si, M.Si (Indonesia)  
Yuniarti Yuskar S.T, M.T (Indonesia)  
Dewandra Bagus EP., B.Sc (Hons) M.Sc. (Indonesia)  
Budi Prayitno S.T, M.T (Indonesia)  
Adi Suryadi B.Sc. (Hons) M.Sc. (Indonesia)  
Babag Purbantoro, S.T, M.T (Indonesia)  
Pakhrur Razi, S.Si, M.Si (Indonesia)  
Eunice Wanjiku Nduati M.Agr (Kenya)  
Muhammad Zainuddin Lubis S.Ik M.Si (Indonesia)

# PREFACE

Welcome to the Journal of Geoscience, Engineering, Environment and Technology (JGEET). JGEET is a peer reviewed, open access and online journal in English for the enhancement of research in various areas of science and engineering. The aim of the JGEET is to give a highly readable and valuable addition to the literature which will serve as an indispensable reference tool for years to come Now, we're publishing our new issue Vol 03 No 01 2018.

We are pleased the scientist and researcher to publish in this journal. This journal discussed the topic related to the areas of geoscience, engineering, environment, and technology.

As the Editor-in-Chief of the JGEET, I take this opportunity to express my sincere gratitude to authors who have chosen JGEET to disseminate their research. Further, I would like to thank executive editorial advisor, journal manager, editorial member and other supporting staff for the success of this Journal.

We are more than happy to receive contributions for our next issue from academicians, researchers, scholars and practitioners to ensure the consistency and the success of the Journal.

Thank you very much.

Husnul Kausarian, Ph.D  
Editor-in-Chief

## LIST OF CONTENT

### Original Research Article

1. **Experimental Study to Reinforce The Weak Subgrade Soil For Low-Volume Roads by Coir Geotextile Mats..... 1**
2. **Fluid Inclusion Study of The Tumpangpitu High Sulfidation Epithermal Gold Deposit in Banyuwangi District, East Java, Indonesia ..... 8**
3. **Modified Soil-Adjusted Vegetation Index In Multispectral Remote Sensing Data for Estimating Tree Canopy Cover Density at Rubber Plantation ..... 15**
4. **A Study On Influence Of Real Municipal Solid Waste Leachate On Properties Of Soils In Warangal, India ..... 25**
5. **Halogen Chemistry of Hydrothermal Micas: a Possible Geochemical Tool in Vectoring to Ore for Porphyry Copper-Gold Deposit ..... 30**
6. **The Phenomena of Flood Caused by the Seawater Tidal and its Solution for the Rapid-growth City: A case study in Dumai City, Riau Province, Indonesia..... 39**
7. **Spatial Statistical Analysis for Potential Transit Oriented Development (TOD) in Jakarta Metropolitan Region ..... 47**
8. **Infiltration Rate of Quarternary Sediment at Rumbio Jaya, Kampar, Riau ... 57**
9. **Quaternary Sediment Characteristic of Floodplain Area: Study Case at Kampar River, Rumbio Area and Surroundings, Riau Province..... 63**

# AUTHOR GUIDELINE

## Journal of Geoscience, Engineering, Environment, and Technology

### 1. Paper Title

This is your opportunity to attract the reader's attention. Remember that readers are the potential authors who will cite your article. Identify the main issue of the paper. Begin with the subject of the paper. The title should be accurate, unambiguous, specific, and complete. Do not contain infrequently-used abbreviations. The title of the paper should be in 16 pt bold Font Gulliver-Regular and be centered. The title should have 0 pts space above and 12 pts below.

### 2. Authors Name and Affiliations

Write Author(s) names without a title and professional positions such as Prof, Dr, Production Manager, etc. Do not abbreviate your last/family name. Always give your First and Last names. Write clear affiliation of all Authors. Affiliation includes a name of department/unit, (faculty), a name of university, address, country. Please indicate Corresponding Author (include email address) by adding an asterisk (\*) in superscript behind the name.

Author names should be in 12 pt Gulliver-Regular with 6 pts above and 12 pts below. Author addresses are superscripted by numerals and centered over both columns of manuscripts. Author affiliations University name / institution / research study / company should be in 7 pt Gulliver-Regular. The body of the text should commence two lines (24 points) below the last address.

**Present/permanent address.** If an author has moved since the work described in the article was done, or was visiting at the time, a 'Present address' (or 'Permanent address') may be indicated as a footnote to that author's name. The address at which the author did the work must be retained as the main, affiliation address.start by adding an asterisk (\*) and then email, phone number, font gulliver 7pt.

### 3. Abstract

The word "Abstract" should put in left, bold, 8 point, paragraf space after 6 poin. Abstract should contain summary of the all research (aim, scope, result and conclusion) with maximum 300 words, justified, 8 point, and line spacing : single. For keywords wrote in italic and then separated using symbol (,) with maximum are 6 words.

### 4. Introduction

In Introduction, Authors should state the objectives of the work at the end of introduction section. Before the objective, Authors should provide an adequate background, and very short literature survey in order to record the existing solutions/method, to show which is the best of previous researches, to show the main limitation of the previous researches, to show what do you hope to achieve (to solve the limitation), and to show the scientific merit or novelties of the paper. Avoid a detailed literature survey or a summary of the results.

To prepare your paper, use directly this template and simply replace this text by your text. These instructions are to be followed strictly, and it is strongly advised to use the styles indicated in this document between square brackets. It is strongly advised NOT to use formatting or styles in your paper different from the ones mentioned here.

The book size will be in A4 (210 x 297 mm). Left margin 30mm, Right Margin 2mm, Top Margin 20mm and Bottom Margin: 20mm. Please make sure that you do not exceed the indicated type area.

The structure of manuscripts should follow the following order; title, authors, affiliations, abstract, keywords, main text, (acknowledgement), (appendix), (nomenclature), references. The items with parentheses are not mandatory.

The maximum pages printed in JGEET are supposed to be 10 for an original paper and 15 for a review paper. Do NOT include page numbers. Do NOT add Headers or Footers. Prescribed font is Gulliver, 9 points, with an single line spacing. However, if your text contains complicated mathematical expressions or chemical formulae, you may need to increase the line spacing. Running text should be justified.

## 5. Section headings

The way chapter titles and other headings are displayed in these instructions, is meant to be followed in your manuscript.

Level 1: Gulliver, 9, Bold, 6 pt spacing before heading, 6 pt spacing after heading.

Successive Levels: Times New Roman, 8, Bold, 6 pt spacing before heading, NO spacing below heading.

Do NOT begin a new section directly at the bottom of the page, but transfer the heading to the top of the next page. Cite the main scientific publications on which your work is based. Cite only items that you have read. Do not inflate the manuscript with too many references. Avoid excessive self-citations. Avoid excessive citations of publications from the same region. Check each reference against the original source (authors name, volume, issue, year, DOI Number).

Please use Reference Manager Applications like EndNote, Mendeley, Zotero, etc. Use other published articles in the same journal as models. If you are cite using mendeley please use **Elsevier Harvard (With Title)** for cite model stlye of this journal.

## 6. Footnotes

It is requested not to us any of footnotes. All references should be in the References. Explanations should be preferably included in the text.

## 7. Symbols and units, numbers

If symbols are defined in a nomenclature section, symbols and units should be listed in alphabetical order with their definition and dimensions in SI units. Please use the SI set of units as much as possible. Wherever the application domain uses a different set of units widely, please minimize the use of non-standard units or non-standard symbols for those units. As examples, the use of “a” for year (annum) is depreciated and the use of “y” is encouraged instead. Similarly, “h” should be used for hours instead of “hr” and “t” instead of “ton” or “tonne”. It is important to take care of the case in which the measurement units are typed. E.g. “Km” does not mean “kilometers”, but “Kelvin-meters”.

When providing numerical values followed by measurement units, please leave a regular space or non-breaking space between each value and the measurement unit. This also includes percentages and degrees Celsius (e.g. 42 % or 35 %, 234 °C, 504 K). This rule also applies to the unit for litre, which is recommended to be capital “L”. The authors are encouraged to render the numbers according to the International rules, specifying the dot as a decimal separator and the comma as a thousands separator.

## 8. Equations

Make sure that placing and numbering of equations is consistent throughout your manuscript.

$$d \left\{ \sum \frac{1}{2} m_k \left[ \left( \frac{dx_i}{dt} \right)^2 + \left( \frac{dy_i}{dt} \right)^2 + \left( \frac{dz_i}{dt} \right)^2 \right] \right\} = \sum (X_i dx_i + Y_i dy_i + Z_i dz_i) \quad (1)$$

$$\bar{C}(t) = \frac{1}{N} \sum_{i=1}^N C_i(t) \quad (2)$$

Left align the equation and put the number of the equation flush-right, using a Right Tab on the right margin. Please reference equations in the text by writing: Eqn. .. (do not use Equation ..) In principle, variables are to be presented in italics.

## 9. Figures and Tables

Figures and tables should be originals or sharp prints. Please use the SI set of units as much as possible. Figures and tables should be centered and placed either at the top or at the bottom of the page. Please do not render tables as pictures and please do not use too small font sizes in the illustrations. Please use the following fonts in your illustrations: Gulliver, Symbol, or use fonts that look similar.

If your figures and tables are created in a Microsoft Office application (Word, PowerPoint, Excel) then please supply 'as is' in the native format, too. Regardless of the application used other than Microsoft Office, when your electronic artwork is finalized, please 'Save as' or convert the images to one of the following formats (note the resolution requirements for line drawings, halftones, and line/halftone combinations given below):

- EPS (or PDF): Vector drawings, embed all used fonts.
- TIFF (or JPEG): Color or grayscale photographs (halftones), keep to a minimum of 300 dpi.
- TIFF (or JPEG): Bitmapped (pure black & white pixels) line drawings, keep to a minimum of 1000 dpi.
- TIFF (or JPEG): Combinations bitmapped line/half-tone (color or grayscale), keep to a minimum of 500 dpi.

Set table number and title flush left above table. Horizontal lines should be placed above and below table headings and at the bottom of the table. Vertical lines should be avoided. Title should use Gulliver 8, with 10 pt before and 4 pt after the paragraph, left justified at the top of the table. Tables have to be included into the text. If a table is too long to fit one page, the table number and heading should be repeated on the next page before the table is continued. Alternatively the table may be spread over two consecutive pages (first an even numbered, then an odd-numbered page) turned by 90, without repeating the heading.

## 10. Figure captions

Fig. 1 Captions should be placed below each illustration, font Times New Roman, 7 pts. Figures and figure captions should be placed center; two narrow figures may be placed side-by-side. Please reference figures in the text by writing: Fig. ... (do not use Figure ...).

## 11. Concerning references

In order to give our readers a sense of continuity, we encourage you to identify JGEET articles of similar research in your papers. Please, do a literature check of the papers published in JGEET in recent years at [jurnal.uir.ac.id/JGEET/Index](http://jurnal.uir.ac.id/JGEET/Index).

For citation and model citation we are using Elsevier harvard (with title), you can find it using mendeley or other reference manager program or using citation machine on the internet, such as <http://www.citationmachine.net/elsevier-harvard/cite-a-report/manual>.

References must be listed at the end of the paper. Do not begin them on a new page unless this is absolutely necessary. Authors should ensure that every reference in the text appears in the list of references and vice versa. Indicate references by (Putra and Choanji, 2016), (Natasia et al., 2016) or (Selley et al., 2005).

Recommendations for references are:

### Book

Rothery, D.A., 2008. Geology. McGraw-Hill Companies, Blacklick, OH.

Or

Selley, R., Robin, L., Cocks, M., Plimer, I., 2005. Encyclopedia of Geology. Geology 3345. doi:10.1016/B0-12-369396-9/00102-7

### Magazine

Geo 2010 hailed as the best Geoscience event in Mideast., 2012. . Oil & Gas News.

### Journal

Schopf, T.J.M., 1978. The Structure of Geology . David B. Kitts. The Journal of Geology 86, 278–279. doi:10.1086/649684

### Thesis

Coons, R.L., 1966. Precambrian basement geology and Paleozoic structure of the mid-continent gravity high. (thesis).

### Dissertation

Beukeboom, T.J., 1976. The hydrology of the Frisian islands (dissertation).

### Report

Khairani, S., n.d. Tinjauan batupasir silika sebagai energi sumber daya alam terbarukan di daerah batam dan sekitarnya (rep.), Tinjauan batupasir silika sebagai energi sumber daya alam terbarukan di daerah batam dan sekitarnya

### Website

Petrology/Mineral Physics [WWW Document], n.d. [WWW Document]. JSG News RSS. URL <http://www.jsg.utexas.edu/research/disciplines/petrology-mineral-physics/> (accessed 12.19.16).

When preparing your reference list, the following should be avoided:

- References not cited in the text.
- Excessively referencing your work.
- Insufficiently referencing the work of others.

Some examples of how your references should be listed are given at the end of this template in the **'References' section, which will allow you to assemble your reference list according to the correct format and font size.** When you are referencing conference proceedings, page numbers should be provided. If proceedings are not available, the lecture identification – e.g. lecture number should be provided instead. When you are referencing websites, an author or authoring institution should be provided. The date of the last access should be provided as well.

The hyperlinks (blue colour and underlining) should be removed from email addresses and web references. You do not need to repeat <http://> as modern browsers do not require it. However the date of the last access should be always provided.

## 12. Acknowledgements

Collate acknowledgements in a separate section at the end of the article before the references and do not, therefore, include them on title page, as a footnote to the title or otherwise. List here those individuals who provided help during the research (e.g., providing language help, or proof reading the article, etc.). Acknowledgement can be written in this paper or not. Using 9 pt font Gulliver-Regular, 6 pt after headings.

## 13. References

- Natasia, N., Syafri, I., Alfadli, M.K., Arfiansyah, K., 2016. Stratigraphy Seismic and sedimentation Development of Middle Baong Sand , Aru Field , North Sumatera Basin. *J. Geoscience, Engineering, Environment, and Technology* 1, 51–58.
- Putra, D.B.E., Choanji, T., 2016. Preliminary Analysis of Slope Stability in Kuok and Surrounding Areas. *J. Geoscience, Engineering, Environment, and Technology* 1, 41–44.
- Selley, R., Robin, L., Cocks, M., Plimer, I., 2005. *Encyclopedia of Geology*. Geology 3345. doi:10.1016/B0-12-369396-9/00102-7
- Trouw, R., Passchier, C., Wiersma, D., 2009. *Atlas of Mylonites- and related microstructures*. Springer, Berlin Heidelberg. doi:10.1007/978-3-642-03608-8



# UIR PRESS

Jl. Kaharuddin Nasution No 113 Marpoyan Damai  
Pekanbaru, Riau 28284  
Phone.(0761) 72126 , Fax. 0761-674834  
e-mail: [jgeet@journal.uir.ac.id](mailto:jgeet@journal.uir.ac.id)  
website: <http://journal.uir.ac.id/index.php/JGEET>

**E-ISSN**



**P-ISSN**

