Guidelines for Authors

This symposium is devoted to the presentation of original works dealing with every aspect of land and maritime border security and safety. Manuscripts submitted to this symposium must not have been published or simultaneously submitted for publication elsewhere.

The following are the specific instructions to be followed in typing and organizing the papers. In addition, a sample sheet made in accordance with these instructions is attached for authors' reference. The software you use to compose your work may not be capable of producing type sizes that exactly match those shown in the specifications below. In such cases you should try to obtain as close a match as possible, using the attached samples as a guideline.

Manuscript Preparation

Manuscripts should be prepared in English or Arabic following these guidelines as a well formatted electronic copy (both in MS Word and PDF). The contents should be presented in a single column on A4 (210mm x 295mm) size paper following these guidelines. The final version of the paper should be submitted through the symposium website (www.sbg-symposium.org) or email to Prof. A. N. Khondaker (nasserk@kfupm.edu.sa and khondaker@sbg-symposum.org) before the deadline (Please see the abstract acceptance letter and visit the symposium website: www.sbg-symposium.org). It is important to make sure that the MS Word version and the PDF version of the submitted manuscript matches exactly. The total number of pages should not exceed 12 pages including figures and tables.

Style of Contribution

Manuscripts should generally contain:

- Main title (not more than two lines printed)
- Author's name and affiliation
- Abstract (an informative summary, not more than 300 words)
- Keywords (5 to 10)
- Text
- Acknowledgements
- References
- Referenced Tables and Figures

Typing and Printing Instructions

Your manuscript should be typed with a line-spacing of 1.4 points and following these guidelines. Please make sure that the colors used in the contents are clear and easily readable. Colored pictures and figures will finally appear in black and white in the hard copy. Therefore, the color combination should be selected appropriately.

Opening Style (First Page)

This contains the title of the paper, the name(s) of author(s), organization and country, the abstract and the first part of the paper (please see the attached sample for margins and other details).

- Start the title of your paper 50 mm down from the top of the specified typing area in Times New Roman font, size 16 points bold, set aligned left. Only the first letters of the main words should be capital.
- Follow this (with one 16 point line space) on a new line, with the authors' names without any prenominal, degrees or qualifications, in Times New Roman font, size 12 point, normal, set aligned left. *Please see the example pages (Page 5) for style where several authors at different organizations are contributing.*
- Follow this, on a new line, with the authors' organization and country only, in Times New Roman font, size 11 point, italic, set aligned left. Contact address could be included as a footnote at the bottom of the first page.
- Start the abstract, with the heading two line spaces below the last line of the address and set in Times New Roman font, size 12 point, bold, set aligned left. Leave one line space and then start the text of the abstract, set in Times New Roman font, size 12 point, normal, and justified with 14 points line spacing. It should not run into the next page.
- The abstract must be followed by 5 to10 keywords related to the main topics of the paper.

Other Pages

Main Text

For the second and following pages, use the margins shown in the attached sample page. Texts should be in Times New Roman font, size 12 point, normal, justified with a line spacing of 14 points. Separate paragraphs should have one line space between them with an indentation of 6.4 mm.

Headings

The headings should be set aligned left as shown in the attached sample page. Use Times New Roman font, size 12 point, bold for the main section headings, size 12 point, italic for the second level headings, and size 12 point, normal for the third level headings. If you wish to number your headings, please follow the style shown in the attached sample page.

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All tables and figures should be numbered with Arabic numerals. Avoid hyphenation at the end of a line. Weights and measures must be expressed in metric units according to the *Systeme Internationale* (non-metric equivalents, if appropriate, can be included in parentheses). All non-standard abbreviations or symbols should be defined when first mentioned. Please see the attached sample for tables and figures.

Tables

Tables should be inserted in the text close to the first citation, or should be placed on separate sheets at the end of the paper, before the Reference Section. Very extensive tables of data are of questionable value and authors should consider more succinct ways of presenting essential information. The same data should not be presented in both tabular and graphical form.

Figures

All photographs, schemes, and drawings should be referred to as figures, numbered consecutively, and inserted in the text close to the first citation, or should be placed on separate sheets at the end of the paper, after the tables and before the Reference Section. One set of figures should be of a quality suitable for reproduction (original drawings or high quality photographic reproduction; xerographic copies are not acceptable); photographs should be sharp with clear contrasts. Scales, if needed, should be shown on the drawing or photograph.

Equations

Equations should be centered and numbered in parentheses flush to the right hand border of the frame, without dots leading to the numbers, and leaving a single line space clear above and below the equation. Equations are referred to as eqn. (n). Please see the attached sample.

References

All cited references should be listed at the end of the text in strict alphabetical order of authorship and year of publication. Give all authors' names, full article title, and inclusive pages. Journal titles should be given in full. Citations in the text should be by author and date, given in parentheses; 'et al.' is used for papers with three or more authors. Text citations to references should be made thus: (Khondaker et al., 1990; Khondaker, 2000). It is the author's responsibility to ensure that the references are correct.

Examples:

Journal:

Swedmark, M., Granmo, A., Kelberg, J., 1973. Effects of oil dispersants and oil emulsives on marine animals, Water Research, 7(7), 1649-92.

Book:

Bryan, G.W., 1976. Heavy metal contamination in the sea. In: Johnston R. (Ed.), Marine Pollution, Academic Press, London, pp.185-302.

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Please include the text file and separate table and illustration files, if available. Illustrations should accompany both the final MS Word and PDF versions, as appropriate. The file should follow the general instructions on style/arrangement and, in particular, the reference style of this journal as given above. Please also keep a back-up copy for your reference and safety.

ORAL PRESENTATION

The total time for the oral presentation and discussion is 20-25 minutes for each paper. The speakers are required to finish the oral presentation within 15-20 minutes and have the remaining 5-10 minutes for questions and discussions. The following facilities and resources will be made available for the speakers during the symposium:

- Overhead projector
- PC viewer that projects directly from a personal computer (PC) and a video tape
- PC with Microsoft Office and remote control unit
- Laser printer

For more information, please contact:

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Sample First Page

Drilling Mud Modeling – An Overview

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Abstract

In recent years, much concern has developed over the environmental impacts of offshore drilling; in particular, the fate and effect of drilling fluid and cutting discharges. In response to this concern, field dispersion studies have been conducted to determine the actual concentrations of components of the offshore drilling wastes in the ocean environment during discharge. The results of these studies have been extremely useful in helping to understand the fate of drilling waste discharges. However, the results from one study site may not always be applicable to other sites owing to differences in discharge conditions. It was felt essential to give operators and regulatory agencies the capability of predicting the fate of drilling discharges under a variety of discharge conditions.

A computer-based simulation model, being recognized as an indispensable tool in a wide range of environmental studies, can be used to predict the fate of drilling discharges. A realistic modeling approach involves a comprehensive description of the processes influencing the fate of the discharged materials. Different investigators approached the problem from many viewpoints and the resulting achievements are so extensive and scattered that it seems essential to inventory the completed works. This paper presents a systematic review of the available modeling works. A complete picture of the present status of the problem is also provided. Issues that remain obscure or unaddressed by the current day investigators are pointed out to facilitate future research directions and/or alternatives to advance technology for a greater understanding and more comprehensive analyses of the fate of drilling discharge in the marine environment.

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Keywords: Drilling Mud, Simulation Modeling, Drill Cuttings, Sediment Transport, Marine Pollution

1 Introduction

The processes of exploring and extracting oil and gas from beneath the ocean floor often require disposal of materials such as used (spent) drilling fluids (also called drilling muds) and solids (i.e. drilling cuttings). These materials are often discharged from drilling platforms into the surrounding marine water.

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Sample Typical Page

Considerable attention is currently being focused on the disposal practices of the wastes being generated by the oil/gas/geothermal exploration and production drilling industry. These wastes are in the form of drilling fluids (muds) and subsequent drilled solids (cuttings). Drilling fluids and cuttings are complex mixtures of clays and chemicals Potential adverse impacts of improper disposal of drilling fluids and cuttings include (i) surface soil and water degradation, (ii) groundwater contamination, and (iii) pollution in the marine environment.

In recent years, much concern has developed over these environmental impacts of offshore drilling; in particular, the fate and effect of drilling fluid and cutting discharges. In response to this concern, field dispersion studies have been conducted to determine the actual concentrations of components of the offshore drilling wastes in the ocean environment during discharge. The results of these studies have been extremely useful in helping to understand the fate of drilling waste discharges. However, the results from one study site may not always be applicable to other sites owing to differences in discharge conditions. It was felt essential to give operators and regulatory agencies the capability of predicting the fate of drilling discharges under a variety of discharge conditions.

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A computer-based simulation model, being recognized as an indispensable tool in a wide range of environmental studies, can be used to predict the fate of drilling discharges . A realistic modeling approach involves a comprehensive description of the processes influencing the fate of the discharged materials. A systematic modeling approach is presented in the following sections.

2 Drilling Mud Discharge Modeling Concepts

The Mathematical description of mud discharge in the marine environment is rather complex. A conceptual narrative of the model is customary for the development of appropriate form of mathematical model. The following subsections represents a general overview of the modeling concepts which is followed by a more detailed description of the three discharge phases of transport and relevant processes involved in modeling of drilling discharge. It is worth mentioning here that only the physical aspects of the phenomenon will be analyzed since the chemical, biological and ecological aspects are beyond the scope of this paper.

The most common type of drilling fluid (mud) used in drilling is a slurry of solids particles of various sizes and densities (formation solids, bentonites, barites) combined with water (fresh water, seawater), and many different additives (lignosulfonate, lignites, caustic soda, soda ash, lime).

For the purpose of modeling, mud is assumed to be composed of any type of solid, chiefly clay materials and formation drilling solids (specific gravity of 2.6) plus barite (specific gravity of 4.2 to 4.5), combined with s fluid (specific gravity somewhere between those of fresh water and saltwater) that may contain a conservative soluble tracer (trace metal or organic compound).

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EXAMPLE OF TABLE LAYOUT AND TABLE CAPTION

Table 1. The maximum of the tracer concentrations.

	value ($\mu g/m^3$)	Receptor (num)	time (hour)
measurements	32.2	18	0800
set 1, $u_{min} = 0.5$	7.8	20	0800
set 1, $u_{min} = 1.0$	10.9	21	0800
set 1, $u_{min} = 1.5$	14.8	22	0800
set 2, $u_{min} = 0.5$	18.4	6	0800
set 2, $u_{min} = 1.0$	17.0	9	0700
set 2, $u_{min} = 1.5$	18.8	18	0600

EXAMPLE OF FIGURE AND FIGURE CAPTION LAYOUT

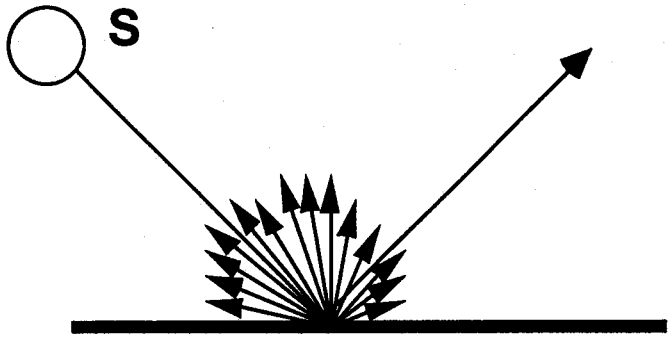

Figure 1: Example of sound diffusion from a wall.

OR IF THE CAPTION IS MORE THAN ONE LINE

Figure 1: Example of sound diffusion from a wall, from a sound source *S* for a given frequency with a wavelength larger than the wall's surface. The waveform will not bounce off the wall like a beam of light but instead will spread away from the wall in all directions.

EXAMPLE OF EQUATION LAYOUT

$$\frac{dm}{dt} = \sum_{i=1}^{N_i} \dot{m}_i - \dot{m}_e \tag{1}$$

As a result, eqn (1) can now be written as follows:

$$\frac{\partial T}{\partial t} + \frac{\partial}{\partial x_k}(\upsilon_m T) - a_T \frac{\partial^2 T}{\partial x_k^2} = \frac{1}{\bar{c}_p m} \sum_{i=1}^{N_i} \dot{m}_i \left[\sum_{s=1}^{N_s} (h_{is} - h_s) \xi_{is} \right], \\ - \sum_{s=1}^{N_s} \frac{\dot{\omega}_s h_s M_s}{\rho \bar{c}_p} - \frac{\dot{Q}_{loss}}{\bar{c}_p m} - \frac{1}{\rho \bar{c}_p} \frac{\partial p}{\partial t} \tag{2}$$

$$\frac{V}{R_m} \frac{\partial p}{\partial t} = \sum_{r=1}^{N_r} m_r T_r \sum_{s=1}^{N_s} \frac{1}{M_s} \frac{\partial \xi_{rs}}{\partial t} + \sum_{r=1}^{N_r} m_r \frac{\partial T_r}{\partial t} \sum_{s=1}^{N_s} \frac{\xi_{rs}}{M_s} \\ + \sum_{r=1}^{N_r} T_r \frac{\partial m_r}{\partial t} \sum_{s=1}^{N_s} \frac{\xi_{rs}}{M_s}. \tag{3}$$