



The Third IASTED African Conference on
Power and Energy Systems

~ *AfricaPES 2010* ~

Science and Technology Applications for Health and Sustainable
Development

September 6 – 8, 2010

[Gaborone, Botswana](#)

SPECIAL SESSION for AfricaPES 2010

"Low energy buildings: zero-net-energy mission"

Organizer: Dr. Frédéric Miranville

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Brief description of special session

The increase of the greenhouse gas effect has for consequence the global warming of the earth, and consequently important modifications of the climate. It has been clearly stated that the observed increasing rate of CO₂ in the atmosphere is due to human activities and in particular to the means of production of energy. Kyoto protocol has indicated the objective to reduce the world emission of greenhouse gases of 5.2% in comparison with 1990 data. It is thus important, a large part being associated with the energy consumption of buildings, to improve their thermal conception and to promote their structural potential to produce electricity. Passive solutions are in particular required for the bioclimatic conception of building envelopes. Using such technical solutions, the construction of low energy buildings is possible. In addition, developing efficient systems to produce renewable energy, such as PV panels, offers the possibility to obtain zero-net-energy buildings. With the development of high performance building envelopes, equipped with efficient systems, powerful solutions can be elaborated to protect environment. This session is dedicated to the recent development in the field of zero-net energy buildings, and aims to present an overview of the associated world research.

Submission

Submit your papers via email (frederic.miranville@univ-reunion.fr) in pdf format by **March 15, 2010**. Receipt of paper submission will be confirmed by email.

Papers submitted to the organizer will be sent to at least two independent reviewers.

All authors accepted for the special session are required to register and provide full payment by the conference registration deadline.

All final papers must be received by the conference final submission deadline and must adhere to the IASTED final paper formatting requirements indicated further in this document.

**Preferred email address for receiving paper submissions is
frederic.miranville@univ-reunion.fr**

FORMATTING REQUIREMENTS FOR FINAL PAPER SUBMISSION

Please begin formatting your paper by using the Word or LaTeX templates provided on the IASTED website at <http://www.iasted.org/formatting-final.htm>. Please note that formatting your paper is critical to ensure publication in the conference proceedings.

General layout of your paper:

Language must be English – please remove any other language and language fonts

Paper size must be **LETTER**: 8.5” by 11.0” or 21.6cm by 27.9cm

Margins must be 1.25”(3.2cm) for the top of the **first page** with 0.75” (1.9cm) for left, right, and bottom margin. All **subsequent pages** should be 0.75”(1.9cm) for top, bottom, left, and right margins.

Font must be Times New Roman throughout the document, single-spaced (unless you are using super- or subscripts)

Justify your entire document, **NO** page numberings

2 columns should be used throughout the entire paper **except the title and author info** which should be centered above the 2 columns. The column spacing should be 0.5" (1.3 cm).

Formatting specific areas of your paper:

The title of your document should be 14pt, **bold**, UPPERCASE, centered over the 2 columns of your paper, and MAXIMUM 14 words in length.

The author information (Name, affiliation, address, country, e-mail address) should follow the title in 10pt font

The body of your paper should be formatted in **2 columns** with **10pt** Times New Roman font, single-spaced, flowing (newspaper style)

The ABSTRACT section should begin with a 10pt, all caps, bold header, followed by a maximum of 200 words, clearly outlining the contribution of your paper.

The KEY WORD section should begin with a 10pt, all caps, bold header, followed by a maximum of 6 key words

The introduction should clearly explain the nature of the problem, purpose, and contribution of the paper

Tables and graphs must have a minimum of 8pt type size, line thickness at least 0.13” or 0.3mm. The captions must be upper and lower case, centered over 1 or 2 columns of the body text depending on the size of the table or graph.

Diagrams and images must be computer-designed and submitted as **embedded** images in your document. Digitized photographs in 256 grey scale are recommended, however, you can submit color

images (they will show up in black and white in the printed proceedings and in color on the CD proceedings.)

A Conclusion has to be included at the end of the paper, clearly indicating results, limitations, advantages, and possible applications of your research.

An Acknowledgement can be included after the conclusion if the paper was financially or otherwise supported.

References must be **numbered in the order cited** in the manuscript and indicated in the text by a number in square brackets (e.g. [1]). The correct format for references is:

(Format for Papers)

[1] W.J. Book, Modelling design and control of flexible arms: A tutorial review, *Proc. 29th IEEE Conf. on Decision and Control*, San Francisco, CA, 1990, 500-506

(Format for Journal Papers)

[2] M. Ozaki, Y. Adachi, Y. Iwahori, and N. Ishii, Application of fuzzy theory to writer recognition of Chinese characters, *International*

(Format for Books)

[3] R.E. Moore, *Interval analysis* (Englewood Cliffs, NJ: Prentice-Hall, 1966).

Note that the title of the book is in lower case and italicized. There is no comma following the title. Place of publication and publisher are given.

SUBMITTING YOUR FINAL MANUSCRIPT

The deadline for receipt of the final paper is posted on the conference webpage. In order for your final paper to be published, the following must be satisfied:

Your paper must be registered and fully paid for by the deadline indicated on the web page.

Your paper must be presented at the conference by one of the authors

Your paper must be submitted via e-mail to frederic.miranville@univ-reunion.fr as a word document (.doc), and/or postscript (.ps), or Adobe Acrobat (.pdf) in an attachment.

Please proof read your final paper carefully before submitting it.

COMMON FORMATTING PROBLEMS

For LaTeX users:

Please use the TeX template and accompanying style file at: <http://www.iasted.org/formatting-final.htm>

The following instructions should make your final file letter size format:

The first line of your TeX file should be: `\documentclass[twocolumn,letterpaper,10pt]{article}`

`Dvips -t letter -Pwww -o filename.ps filename.dvi`

When you generate your paper to .pdf, please check the paper size on the bottom left corner of the .pdf to ensure that it is 8.5" by 11.0".

Some LaTeX will ignore directives about paper size. If your file turns out in A4 you need to edit your **config.ps** file so that the parameters for letter size paper are first in the list of paper sizes.

Please also ensure that your paper shows **Type 1 (true type)**, not Type 3 (non true type) **font**.

LETTER SIZE
(8.5" x 11" or 21.6 cm x 27.9 cm)
Page Layout Guidelines

FONTS

Body Text: Times New Roman
Headings: same as body text

MANUSCRIPT TITLE

Type size 14 point

UPPER CASE

BOLD

Centered over two columns of body text

AUTHOR INFORMATION

Type size 10 point

Upper and lower case for name

Upper and lower case for address

Style normal

Centered under the title

HEADINGS

Type size 12 point upper and lower case
or UPPER CASE in 10 point

Style **BOLD**

Alignment left

BODY TEXT

Type size 10 point

Upper and lower case

Style normal

Alignment fully justified

CHARTS, GRAPHS, ILLUSTRATIONS, PHOTO-GRAPHS

Type size 8 point minimum

Upper and Lower Case Captions

Style normal

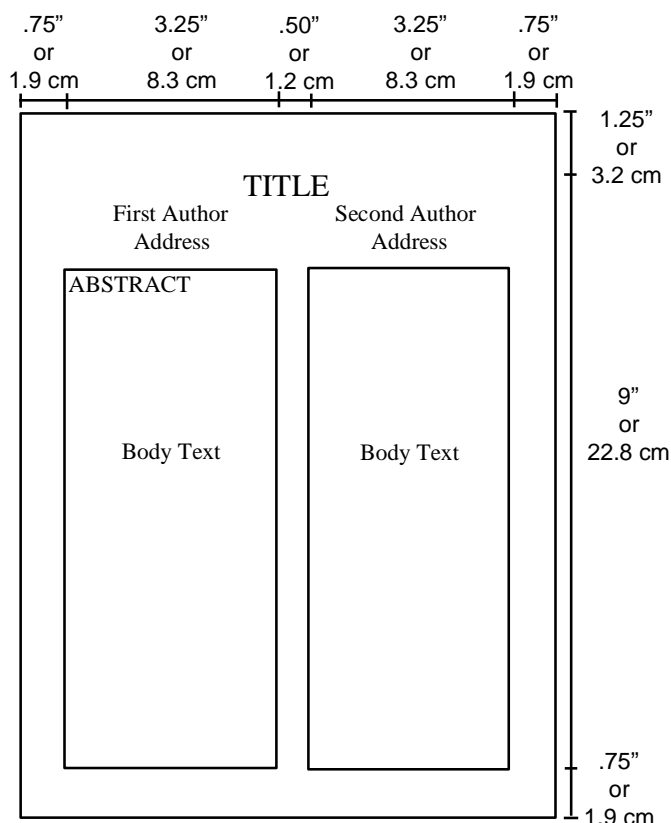
Centered over 1 or 2 columns of body text

Line thickness minimum .013" or .30 mm

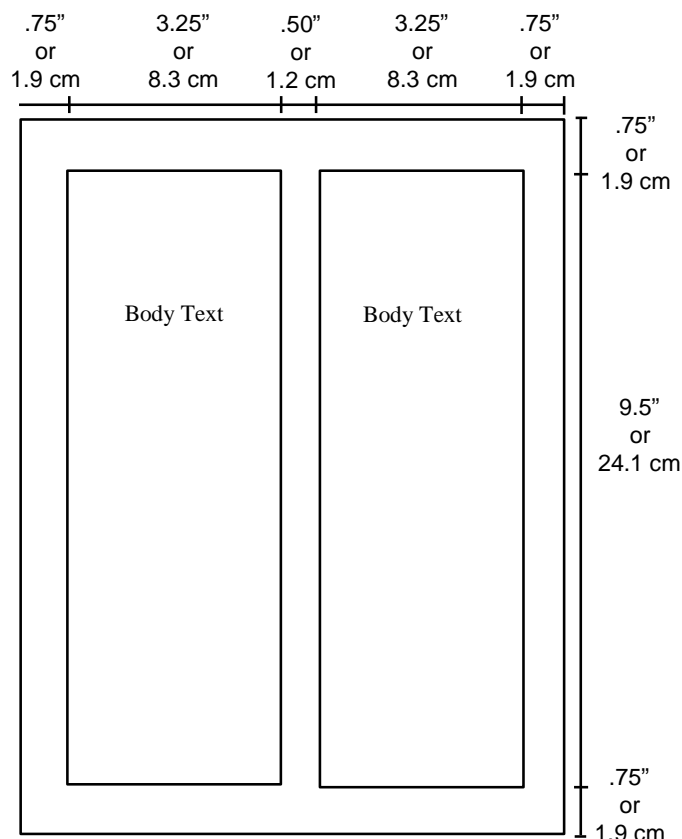
Black-and-white line drawings, charts, and graphs

Greyscale photographs

FIRST PAGE



FOLLOWING PAGES



TEMPLATE

ENTER TITLE HERE (14-POINT TYPE SIZE, UPPERCASE, BOLD, CENTERED OVER TWO COLUMNS, MAXIMUM 14 WORDS IN LENGTH)

Author (or authors) Information entered here

Name(s)

Affiliation

Address

Country

Email addresses

(10-point type size, upper and lower case, centered under the title)

ABSTRACT

Your paper should be in the same format as this file. The abstract goes here. Your abstract should be a maximum of 200 words here clearly outlining the contribution of your paper.

KEY WORDS

Maximum of six words. *e.g.* Modelling, simulation, artificial intelligence, and neural networks

1. Introduction

Clearly explain the nature of the problem, previous work, purpose, and contribution of the paper.

2. Body of Paper

For the body of your document, use Times New Roman font, 10-point type size, single-spaced. The whole document should be fully justified (not only left-justified). Headings should be 12-point, upper- and lower-case, bold or 10pt upper case, bold. Subheadings should be 10-point upper- and lower-case.

Paper size: LETTER (8.5" by 11.0" or 21.6 cm by 27.9 cm). A4 (210 mm by 297 mm, 8.26" by 11.69") will NOT be accepted.

Margins:

-Top of first page 1.25" (3.2 cm)

-Bottom, left, and right 0.75" (1.9 cm)

-Subsequent pages 0.75" for top, bottom, left, and right 0.75" (1.9 cm)

-Space between two columns 0.5" (1.25 cm)

Justification: Full justification of the document

No headers and footers, no page numbers.

2.1 Graphs, Tables, and Photographs

Tables and Graphs: Minimum 8-point type size, minimum line thickness 0.13" or .30 mm, all captions should be upper- and lower-case, bold or unbold, and centered over one or two columns of body text (depending on the size of the graph or table).

Illustrations and Photographs: Halftones, minimum of 8-point type size. Captions should be in upper- and lower-case, bold, and centered over 1 or 2 columns of body text (depending on the size of the image). Images must be computer-designed and submitted as EMBEDDED images in your document (postscript, .pdf, or MS Word format). Digitized photographs in 256 greyscale are recommended. Please do not submit color images.

3. Conclusion

Clearly indicate advantages, limitations, and possible applications.

Acknowledgements

A brief acknowledgement section may be included between the Conclusion and References (optional). Do not include author biographies.

References

References need to be numbered as they appear in your text ([1], [2], [3], etc) and should appear in your reference section in numerical order (not alphabetically).

The required format for references is as follows:

(Format for Proceedings Papers)

[1] W.J. Book, Modelling design and control of flexible manipulator arms. A tutorial review, *Proc. 29th IEEE Conf. on Decision and Control*, San Francisco, CA, 1990, 500-506.

(Format for Journal Papers)

[2] M. Ozaki, Y. Adachi, Y. Iwahori, & N. Ishii, Application of fuzzy theory to writer recognition of Chinese characters, *International Journal of Modelling and Simulation*, 18(2), 1998, 112-116.

Note that the journal title and volume number (but not issue number) are set in italics.

(Format for Books)

[3] R.E. Moore, *Interval analysis* (Englewood Cliffs, NJ: Prentice-Hall, 1966).

Note that the title of the book is in lower case letters and italicized. There is no comma following the title. Place of publication and publisher are given.

Submitting Your Final Manuscript

Deadline for receipt of final manuscripts is posted on the conference webpage.

In order for your final manuscript to be published, the following conditions must be satisfied:

1. Your paper must be registered and fully paid-for by the deadline.
2. Your paper must be presented at the conference by one of the authors.
3. Your paper must be submitted via email to fmiranvi@univ-reunion.fr as a MS Word (.doc), postscript (.ps), or Adobe Acrobat (.pdf) file attachment. All papers must be submitted electronically, except by prior written arrangement with IASTED. Hardcopies will not be accepted otherwise.
4. Papers poorly produced or incorrectly formatted past the deadline will not be included in the proceedings.