**INSTRUCTIONS FOR THE PREPARATION AND SUBMISSION OF PAPERS FOR PUBLICATION IN THE CONGRESS PROCEEDINGS**

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***Abstract.***This document presents detailed instructions for the preparation and submission of papers to the IX Congresso Brasileiro de Energia Solar. Please, remember the following guidelines: a) type the text in single column format; b) use a maximum of 8 pages size A4 (21 x 29.7 cm), with 2 cm margins on all sides of the text (do not include frames or page numbers); c) use the type Times New Roman 10 pt. in the whole text, except the title; d) prepare an abstract with up to 300 words in italics; e) Always use single space and justified alignment; f) the references must be cited in the format author (year) or (author, year) and listed in alphabetical order at the end of the text; g) figures and photographs included in the text must be good quality; h) all symbols must be defined following their appearance in the text; i) SI (International System) units must be used throughout the text. The work must be prepared preferentially in Portuguese, but texts in English or Spanish will also be accepted, if the author is from a country where the official language is not Portuguese. Papers in Portuguese or Spanish must have the title, the abstract, and the keywords in English after the references. There will be no acceptance of abstracts only. The full paper must be submitted until November 22th 2021 in Adobe Portable Document Format (PDF). Browse the site www.cbens.org.br, in the author area to register your papers and obtain information on how to upload the file with the text. The evaluation result will be given after the paper has been reviewed by the Scientific Committee.

**Keywords:** Solar Energy, Congress, Wind Energy (up to 3)

1. INTRODUCTION

The Proceedings of the IX CBENS will be published electronically, including a complete version of all accepted papers presented during the Congress. The authors of the papers that receive the highest evaluation grades from the Scientific Committee will be invited to submit, after the Congress, an extended version of their papers for publication in the Revista Brasileira de Energia Solar, a technical-scientific journal of the Associação Brasileira de Energia Solar (ABENS). The preparation of the digital version of your contribution must be accordingly with the present instructions and must be submitted in PDF format.

The Scientific Committee of IX CBENS will review all papers. You may be asked for modifications and/or corrections in your submitted paper in order to have it definitely accepted. In this case, the author will receive instructions which will be given in due time. The authors who have accepted papers for the Congress must keep the final approved version safely saved in a text file for eventual format modifications in the case it be selected for publication in the ABENS Journal.

1. **INSTRUCTIONS FOR TYPING**

The text must be preferentially written in Portuguese, but papers in English or Spanish will also be accepted, if the author comes from a country where the official language is not Portuguese. The translation to English of the title, the abstract, and the keywords must be presented at the end of the text (after the reference list), in the case that the text is not written in English.

* 1. Paper size

The full paper, including figures and tables, must be limited to 10 (ten) pages size A4 (21 cm x 29,7 cm). Additionally the PDF file to be uploaded is also limited to a maximum size of 3MB. The authors are kindly asked to hold to these limitations, writing in a concise way and not reducing figures and tables to sizes that may compromise their understanding and their symbols and descriptions.

* 1. Page format

Each page size A4 must be configured so as to present 2 cm margins at all sides of the text. These margins define the usable area. Within this area the text must be single-column formatted. Please, do not use a neither frame around the text nor page numbers.

The final text must have the appearance of the present text.

* 1. General specifications for text format

The text must be typed using Times New Roman size 10 pt., with the exception of the title and the head. These guidelines thus include section and subsection titles, and figure and table titles, besides the normal text. All pages must have the head: **“***IX Congresso Brasileiro de Energia Solar – Florianópolis, 23 a 27 de maio de 2022”*, typed in italics size 8 pt. and centralized, as shown in the pages of this template.

***Paper title****.* Begin, only in the first page, leaving two spaces (14pt) until the first line of the title. The title must be centralized and typed in boldface Times New Roman, size 14 pt., in capital letters, not exceeding three lines. Leave one line space (14 pt.) between the title and the first author.

***Author(s) and affiliation*.** Type the complete name of all authors, centralized, one in each line, followed by the electronic address of at least one of the authors, who will be the corresponding author, using a dash as separator. Each name or group of names must be followed of the corresponding affiliation. The names of all authors must be typed in boldface, whereas all other information must be typed in normal style (neither boldface nor italics). Leave a one-line space (10 pt.), type the number and the name of the subject according to the list in the Call for Papers or in the website of the Congress, then another space of one line and the Abstract.

***Abstract and keywords.*** Type the word ***Abstract.*** in boldface and italics, left-aligned, followed by a dot. Without changing the line, type the abstract in italics with a justified alignment. The abstract should not contain more than 300 words. Skip one line and then type the word ***Keywords:*** (do not forget the colon) in boldface and italics, left aligned. Then type 3 keywords, separated by commas, with only the first letter of each word as capital. Leave a two-line space between the keywords and the following main text.

***Sections´ titles.*** Use only two levels of subsections as presented in this template. Type the title of the section in boldface capital letters, aligned left. Begin typing your identification in Arabic numeral, followed by a dot, and then type the section title 0.75 cm from the left margin. Leave a two-line space (10 pt.) above this title and a one-line space bellow.

For the first level of subsection only the first letter of the title must be capital, being all of them boldface, with the title aligned left. Begin by typing your identification (two Arabic numerals separated by a dot), and then type the Section title 0.75 cm from the left margin. Leave a one-line space (10 pt.) above and below this title.

Do not number the title of the second level of subsection. Use the letters in boldface and italics, with only the first letter as capital, aligning the title 0.75 cm from the left margin and followed by a dot. Begin the subsection text immediately after its title. Leave a one-line space above this title.

***Text.*** The text must be typed in normal style, using single space and justified alignment. Begin each paragraph 0.75 cm from the left margin, not leaving any space between two subsequent paragraphs.

* 1. Equations, symbols and units

The equations must be centralized in the page. Number the equations in sequence with Arabic numerals between brackets and aligned right. Leave a one-line space before and after each equation. For example:

|  |  |  |
| --- | --- | --- |
|  |  | (1) |

Whenever a reference is made to an equation in the text, Eq. (1) must be written.

Symbols must be written in italics. They must be defined when they first appear in the text, with their corresponding units. A section with symbol definitions is not necessary.

All data inserted in the text, including those in the tables and figures, must be specified in the International System of Units (SI). The comma must be the decimal separator (except in the texts written in English).

* 1. **Figures and tables**

Figures and tables must be positioned as near as possible of the text citing them, preferentially below their citation. Text and symbols included in them must be easy to read. Avoid the use of very small symbols. Photographs and other illustrations must bear good quality.

Figures, tables, and their captions must be centered in the text. Position the captions below the figures, leaving a one-line space between them. Position the title of a table above it, also leaving a one-line space between them. Leave a one-line space between the figure or table and the subsequent text.

Number the figures and tables in sequence using Arabic numerals (e.g. Figure 1, Figure 2, Table 1, Table 2). Reference them in the text as Tab. 1 and Fig. 1, without using words such as "below", "above", or "following ".

Name the coordinate axes in the graphs, including the respective units, whenever applicable. Name the table´s columns/lines likewise.

Tab. 1 and Fig. 1 follow as examples.

Table 1 - Electrical specifications of module XXXX for the conditions of  
irradiance 1,000 W/m2, cell temperature of 25°C and spectrum AM 1.5.

|  |  |
| --- | --- |
| CHARACTERISTIC | VALOR |
| Maximum Power | 45 W |
| Maximum Power Voltage | 15,0 V |
| Maximum Power Current | 3,0 A |
| Open Circuit Voltage | 19,2 V |
| Short Circuit Current | 3,10 A |
| *α* Coefficient | 2,5 mA/°C |
| *β* Coefficient | -73 mV/°C |



Figure 1- Curves of spectral flux of the radiation emitted by a   
black body for different temperatures.

* 1. **Authorizations and acknowledgments**

The authors are responsible for guaranteeing the copyright of their entire material of the paper. If copyright material from third party is used in the text, it may be necessary to ask for the authorization from the copyright owner. When registering the paper, the authors must pay the publication fee, and give ABENS the authorization for the publication of their papers, taking all responsibility for their content.

Acknowledgments

This section must be located between the end of the text and the reference list. Type only ***Acknowledgements*** in boldface and italics, aligned left, skip one line, and type the text normally. In this section acknowledgments of support received from individuals or institutions may also be included.

**REFERENCES**

The references must be cited in the text by the author´s name (year) or (name, year). For example: “In a recent work, Oliveira *et al.* (2005) proposed that …” or “Recently (Zilles and Vilela, 2004) it was proposed that …”

The references must be cited in alphabetical order at the end of the text. Do to so, type the word **REFERENCES** in boldface capital letters, aligned left, leave a one-line space and type the references. For each reference, indent all lines, except the first, 0.75 cm from the left margin. All reference included in the list must have been cited in the text and vice-versa. An example of reference list is presented below, including a journal paper, a book, and a thesis.

Blasques, L. C. M., Vale, S. B., Pinho, J. T., 2007. Sistema Solar Fotovoltaico para Geração de Eletricidade na Estação Científica Ferreira Penna do Museu Paraense Emílio Goeldi, Caxiuanã – Pará, I CBENS - I Congresso Brasileiro de Energia Solar, Fortaleza.

Burger, B., Rüther, R., 2006. Inverter sizing of grid-connected photovoltaic systems in the light of local solar resource distribution characteristics and temperature, Solar Energy, vol. 80, n. 1, pp. 32-45.

Duffie, J. A., Beckman, W. A., 1991. Solar Engineering of Thermal Processes, John Wiley & Sons.

Oliveski, R. C., 2000. Análise Numérica e Experimental dos Campos de Temperatura e Velocidade em Armazenadores Térmicos, Tese de Doutorado, PROMEC, UFRGS, Porto Alegre.

##### FORMAT INSTRUCTIONS FOR PAPERS SUBMITTED TO THE CONGRESS

***Abstract.***The purpose of this template is to represent a typical paper to be submitted to the IX CBENS. For those papers written in Portuguese or Spanish, an abstract in English must follow the references section. The corresponding abstract should describe the objectives, the methodology and the main conclusions in no more than 300 words. It should not contain either formulae or mathematical deductions.

**Key words**:Solar Energy, Congress, Wind Energy, (up to 3)