

# SPATIAL INFORMATICS JOURNAL TEMPLATE

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#### **Abstract**

Abstract contains problem statement, approaches/problem solving method, objectives and results obtained. Abstract contains important information about the content of writing that is written briefly, concisely, and clearly in one paragraph, maximum 150 words. [Cambria 12, single space and justified].

**Keywords** 

Maximum 5 words [Font Cambria 12, single space, align left]

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## 1. Introduction

The introduction includes background problems related to supporting theories (literature review) or previous studies (both from journals, as well as current phenomena/issues) as the basis for conducting research. The presentation of the introductory part that contains the background of the problem, theoretical basis, or related research does not have to be subtitled, but is integrated into a unified paragraph, and is presented in narrative form. At the end of the introduction, the purpose and usefulness of the research results are also explained. [Cambria 12, single space]

# 2. Research Method

#### 2.1. Subbab

The research method explains briefly and clearly about the stages of research, including research design, instruments used, data collection techniques, analysis techniques, system design, and several other things related to research problem solving strategies. [Cambria 12, space 1]

The BSS problem can be represented by the equation:

$$S = WX \tag{1}$$

where  $\mathbf{S} \in \mathbb{R}^{CxM}$  is the matrix of C components for M samples,  $\mathbf{W} \in \mathbb{R}^{CxN}$  is the transition matrix with the weight vectors between each signal and electrode and  $\mathbf{X} \in \mathbb{R}^{NxM}$  is the data from N electrodes.  $\mathbf{W}$  is the unknown separation matrix that will satisfy this equation.

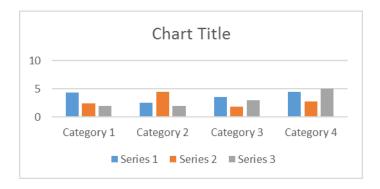
Research methods can be supplemented by tables, graphs (pictures), and/or charts. The table does not contain vertical (upright) lines. Horizontal (flat) lines in the table are only found at the beginning and end of the table. Example of table format:

No	Identity	Туре	Size
1	Username	Varchar	15
2	Password	Varchar	15
3	Name	Varchar	35
4	Email	Varchar	50
5	Phone	Varchar	15

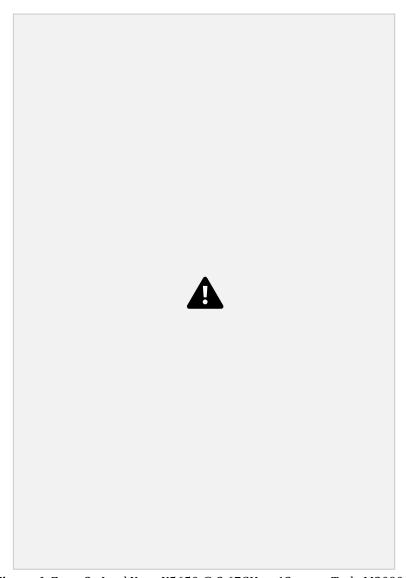
**Table 1.** Title [Cambria 12, space 1]

[Table content writing format: cambria 10, space single]

Giving color to the graph or chart (picture) must be accompanied by a description of the meaning of each color. Example of image format:



**Figure 1.** Title [Cambria 10 space single, format png/jpg]



**Figure 6.** Zeus: 2x Intel Xeon X5650 @ 2.67GHz – 12 cores, Tesla M2090 – the acceleration compared to the single-threaded version: a) CPU-based implementation;

#### b) CPU+GPU-based implementation

## 3. Result and Discussion

This section contains the results of research and discussion, as well as the implementation of the developed system design. In addition, in this section the author should interpret the results of his findings, and confirm his findings with other existing findings or theories. [Cambria 12, space single]

Listing 1: Scheme of fastICA algorithm

```
// W - separating matrix
     // n - number of eletrodes , m - number of samples
     // resultW - the resulting separation matrix
     // whitening Matrix - calculated earlier
        rand Weight(W, n, n); // random weights
 6
        orth (W, n, n); // orthogonalization
 7
        while (! found ) { // next iterations
 8
           found =0:
 9
           if (it > maxNum Iterations - 1) {
10
              // iteration count exceeded
11
           }
12
           it++:
13
           // Weight matrix normalization and convergence estimation
14
           // Checking if the weights have changed
15
           if(! found ) {
16
              // Modification of weights and set found parameter
17
18
        }
19
        // Rewriting the final form of the separating matrix
20
        mul(W, n, true, whiteningMatrix, n, false, n, resultW);
```

## 4. Conclusion and future works

The conclusion contains a brief summary or main points of the writing and should not repeat what has been written in the discussion section. The conclusion contains the important results of the research, and contains the application and development of the research that has been carried out. [Cambria 12, spasi 1]

# Acknowledgment

Acknowledgment to those who have provided support for the research. [Cambria 12, space single]

## References

Articles must refer to at least 10 primary references published in the last 5 years. Writing a reference list must use the IEEE Mendeley style tool with the following conditions. [Cambria 12, space single]

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