

## An Optimal Steganalysis Based Approach for Embedding Information in Image Cover Media with Security

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**Abstract :** This paper deals with the study of interest in the fields of Steganography and Steganalysis. Steganography involves hiding information in a cover media to obtain the stego media in such a way that the cover media is perceived not to have any embedded message for its unintended recipients. Steganalysis is the mechanism of detecting the presence of hidden information in the stego media and it can lead to the prevention of disastrous security incidents. In this paper, we provide a critical review of the steganalysis algorithms available to analyze the characteristics of an image stego media against the corresponding cover media and understand the process of embedding the information and its detection. We anticipate that this paper can also give a clear picture of the current trends in steganography so that we can develop and improvise appropriate steganalysis algorithms.

**Keywords :** optimization, heuristics and metaheuristics algorithms, embedded systems, low-power consumption, steganalysis heuristic approach

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