

**DEVELOPMENT OF GRAPHICAL USER INTERFACE FOR
LIGHTNING RISK ASSESSMENT BY USING MATLAB**

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ABSTRACT

This paper presents the development of graphic user interface for lightning risks assessment for a structure. The goal of this research to identify characteristic of lightning structure and evaluated the lightning risk assessment level. This paper presents the development of lightning risk assessment by using Matlab. The goal of this research is to evaluate the lightning risk level. The risk analysis for the structure is based on Malaysian Standard (MS IEC 62305-2). Software has been developed to analyze the lightning risk to the structure. This tool provides interactive and simplifies interface for user to perform the analysis. It is also designed for a user to view lightning risk assessment results of structure and thus will facilitate the user to verify their manual calculation of risk management. The Graphical User Interface (GUI) in Matlab is used for developing the software. Kolej Teratai 4 in UiTM Shah Alam was selected to calculate the risk assessment of human life and cultural heritage. The computation applied in risk assessment depends on $R_X < R_T$. The lightning risk assessment is evaluated by solving risk assessment test using manual calculation method. The comparison results show the accuracy of lightning risk assessment software developed using the Matlab.

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