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TITLE OF DIPLOMA THESIS:

Quantification of risk with the use of automated data collection systems

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ABSTRACT

The subject of this thesis entitled as "Assessing risks through the use of automated methods of review" is to propose a system of partial risk assessment resources and processes in the construction industry, based on appropriate methods for automated review. Specifically, the research deals with the identification of the Automated Data Collection (ADC) through literature research which are used today and their presentation, a comparative analysis of different types of ADC through the advantages and disadvantages in their application in risk analysis and the development of a risk assessment system based on ADC. The system which is developed has as main object to identify and quantify the random responses - uncertainties of the system's risk factors under the influence of an imminent danger, a great challenge in other words of the impossibility problem to quantify factors. Finally, an example application study is presented showing the effectiveness of the proposed identification and risk assessment system. The conducted results of the implementation study are preliminary but capable evidences for the use of the proposed system. A more extensive study is proposed to be followed for the development of appropriate valuation models of the various elements identified by the proposed system and the final assessment of the entire system which is under study.

KEYWORDS

Automated data collection, Risk identification, Risk quantification