

Doctoral School of Information and Biomedical Technologies Polish Academy of Sciences

Domain: IT

SUBJECT: Algorithmic approach to developing/improving safety procedures in complex environments in the presence of multiple hazards

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Assistant supervisors, contact:

Place of research: Systems Research Institute

Recruitment & Selection: Interview

Number of positions: 1

Project Description

It is an obvious fact that safety procedures are vital for the proper, reliable and incident or accident-free functioning of industrial facilities, infrastructures of various types, airports, urban complexes, etc. The development of such a procedure consists in identifying the possible hazards, collecting safety-related data – both current and historical, producing a set of safety rules, and analyzing their effectiveness with the aim of possible improvements. The complexity of the analyzed environment, dependencies between its components, and the amount of collected data often exceed the possibility of human perception and cognition. In such circumstances it is necessary to aid the process of developing safety policies with appropriate information technology tools. The task of doctoral candidates interested in this topic would be to design algorithmic frameworks for developing safety procedures in selected types of environments, using the state-of-the-art tools and knowledge.

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