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## THE STUDY OF SOCIOTECHNICAL INTERACTIONS IN AIRPORT OPERATIONS

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Passengers and their baggage inspection is one of the components of the airport operational activities. This is one of the most important processes, the purpose of which is to ensure ground security.

The aim of our study is a qualitative assessment of the human factor impact on the passenger inspection system at the airport.

Inspection is carried out by the aviation security service of the airport using various technical means, thus, in the course of the inspectors' work sociotechnical interactions constantly arise [1; 2].

The influence of the human factor can be assessed by analyzing the work of the security service, namely the interaction of the introscope operator with the X-ray television device.

In this study, to describe such interaction, the SHELL model is used, which describes various parts of the sociotechnical system.

In the course of the study, the interactions of the operator with such parts of the system as: the environment, the introscope, passengers and the information environment are analyzed. All parts of this system create conditions for the manifestation of the human factor.

The idea of using convolutional neural network networks for the analysis of data – images obtained from the introscope, with subsequent automatic detection of dangerous objects, is proposed. The use of this technology can facilitate the work of the operator, reducing the influence of the human factor in this socio-technical system.

### References

1. Чайкина А.А., Потапов В.И. Управление социально-техническими системами на транспорте: учебное пособие. Самара: Издательство Самарского университета, 2021. 80 с. ISBN 978-5-7883-1643-7.

2. Сверточные нейронные сети. URL: <https://habr.com/ru/articles/348000> (дата обращения: 05.03.2023).