

## **Abstract**

Work of groups in the extreme, isolated and confined environment relates to the high risks and demands as well. One of the groups working in that specific conditions are the space crews. Attention has been focused recently on preventing the risk of their failure.

For a successful fulfilment of the space missions, it seems that the relations between the crew members are crucial. They manifest in various areas: communication, cooperation, group cohesion, mutual trust, support and others. The theoretical part of this thesis describes selected factors related to interpersonal relationships. Two groups of factors are discussed - factors connected with a diversity of the crew and the and the situational factors.

There is a discussion of the methods used for measuring and assessing the interpersonal relations, their advantages and limitations. As a follow-up to this part, socio-diagnostic method called “sociomapping” is described in detail because of its use in the empirical part of the thesis.

The goal of the empirical part is to analyse two areas: the development of the group dynamics during a mission and the connection between the gender-mixed crew and the tendency to creating the subgroups. Previous research show ambiguity in the research findings. For this purpose, data from 17-day simulation of the crew isolation, as a part of international project SIRIUS 2017-2022, were analysed.

## **Keywords**

interpersonal relations, crew, factors, isolation, sociomapping