

## **Abstract**

This master thesis deals with the topic of expert systems in the military. In the first part, expert systems are described in general focusing on the theoretical aspects. The creation, types, structure, architecture, advantages, disadvantages and history of expert systems and knowledge acquisition are described.

The next part of the thesis deals with the specific military and security (defence) applications of expert systems. There are descriptions of applications from Ground forces (ADRIES, ESROC, KBGIS, PRIDE, TED systems), Air forces (AIRID, LES, TATR), NAVY (systems BATTLE, SIAMES systems), Joint forces (AI-EOD, CMES, GTEX, MBEES, MCTA, SEAT SEC systems) and security areas (EPS-APES, DOC - EXPLOIT, FRIEND – FOE / FIRE DECISION systems). A more detailed description of ADRIES, BATTLE, KBGIS a FRIEND – FOE DETECTION / FIRE DECISION expert systems is included in the final part of the thesis.