**Image processing methods in systems for helping the blind in road crossing**
Lead Research: **izv.prof.dr.sc. Krešimir Nenadić**
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Advanced digital assistance systems for the blind and visually impaired in movement are very rare. Preliminary research indicate that the use of cameras and portable computers could provide useful information from the environment for the blind and visually impaired people to help them in independent movement. The aim of this project is to develop image and video processing methods for helping the blind and visually impaired when crossing the road. This research is focused on the development of methods for pedestrian crosswalk detection and localization to direct the user in the right direction. Also, as part of this project, methods for recognition of traffic lights for pedestrians will be developed. The methods will be based solely on the digital image processing techniques and potential assistance system will use monocular camera and portable device during the user movement. Except the development of methods that will potentially be implemented in the assistance system for the blind, this project proposal also has aim to raise the awareness about the problems that the blind and visually impaired people face in their daily movement.