FIT 2009
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Research topics on Artificial Vision

Artificial Vision:
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1) Develop an image processing tool for the motion detection on imagesacquired by a static camera exploiting a frame to background scheme. (MATLAB).

2) Develop an image processing tool for the motion detection on images acquired by a moving camera exploiting a frame by frame scheme. (MATLAB).

3) Develop an image processing tool for the image registration and stitching of images acquired by a moving camera (MATLAB).

4) Study and develop a module for the rectification of stereo images (MATLAB) .

5) Investigate SIFT and SURF features for the feature tracking

6) Investigate people detection techniques for the segmentation of person inside infrared images.

7) Study and develop calibration techniques for calibrating Pan-Tilt-Zoom cameras with respect to a 2D map

8) Develop different skin detection algorithms and define a data fusion mechanism for the integration of the scores (MATLAB)

The assignments are given in increasing order of difficulty.