PROPOSAL OF THESIS TOPIC FOR MGR INŻ. (MSE) PROGRAMME IN TELECOMMUNICATIONS AND COMPUTER SCIENCE

Topic: Object detection in digital images

Topic in Polish: Detekcja obiektów w obrazach

Supervisor: dr hab. inż. Krzysztof Ślot

Auxiliary supervisor: -

Goals and scope of the work:

The goal is to implement an object detection method, which can be used for detecting faces, eyes or other complex structures in 2D images. The method is based on Haar-wavelet decomposition of images. This is a simple, yet efficient way of representing arbitrary objects – a 2D image intensity distribution is approximated using a sequence of primitives, which are square-like shapes. The method has numerous applications in biometrics and pattern recognition systems.

Prerequisites (e.g. experience in writing programs in a computer language or knowledge of a foreign language):

Basic image processing and basic object-oriented programming (JAVA, C++) skills

Literature:

K. Ślot: “wybrane zagadnienia biometrii” WKiŁ, 2008 (in Polish)

Materials in English will also be provided.