

Invited Talk at IMM

Wednesday, February 11th at 14-15 in R053, B321

Computer-aided diagnosis at the Image Sciences Institute

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In this talk I will give an overview of our research on segmentation and computer-aided diagnosis at the Image Sciences Institute, University Medical Center Utrecht, the Netherlands. In projection chest radiography, topics are a new detection scheme for lung nodules, rib segmentation using iterated contextual pixel classification, and a comparative study between four methods (active shape models, active appearance models, and two pixel-based approaches) for lung field, heart and clavicle segmentation. In chest CT, a CAD system to detect interstitial disease has been developed and two methods for automatic lung segmentation in the presence of dense abnormalities will be compared. For retinal image analysis, vessel segmentation and a detection system for micro-aneurysms will be discussed. Finally, an automatic system for the detection of arterial calcifications from CT data is presented, that may be used for automatic calcium scoring in the future.