

システム情報工学研究科修士論文概要

年 度	平成 24 年度	学位名	修士(工学)
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論文題目 Cancer Detection in Pathological Images based on Higher-order Local Auto Correlation Feature (高次局所自己相関特徴を用いた病理画像からのがん検出)			
論文概要 <p>Pathological diagnosis plays a crucial role to indicate the presence or absence of cancer, the type of cancer, and so on. However, the increasing working burden on pathologists due to the shortage of pathologists may indirectly lead to decline of diagnosis quality and considerable danger of oversight and variability in diagnose.</p> <p>To overcome these problems, this thesis develops a computer-aided pathological diagnosis (CAD) system using Higher-order Local Autocorrelation feature¹). In this CAD system, features of benign pathological images are learned to detect anomaly. In image processing, image is scaled by combination of color space and segmented into nucleus, cytoplasm and background area. And, adjustment of HLAC feature is conducted by hill climbing algorithm. Also area scalable calculation in subspace method was proposed to detect the location of cancer. The ability of cancer detection is improved by these methods. Finally, experiments are performed and experiment results are presented to demonstrate the effectiveness of proposed methods.</p>			
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