



CENTRO DE INVESTIGACIÓN Y DE ESTUDIOS AVANZADOS DEL IPN

El Departamento de Control Automático

invita cordialmente a su

Seminario Departamental

Oriented Filtering as Preprocessing for Noisy Medical Images

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Planta Baja del Depto. de Control Automático, CINVESTAV-IPN, Unidad Zacatenco, D.F.**

Abstract:

The detection of vessels in endoscopic images of low quality needs preprocessing for noise reduction. Filtering considering the orientation of structures allows noise reduction while conserving essential information like lines and edges. The detection of the orientation of structures is based on the gradient using the structure tensor. The oriented filters are adaptations of average filters for noise reduction and DoB-filters (Difference of Boxes) for detection of line like structures. After this preprocessing, the segmentation of vessels is done by region growing. After skeletonizing, the vessel can be described by a graph, and it is possible to derive statistical measures.