

In this work we propose an algorithm for content based image retrieval based on random selection of circular bubbles on the reference image. More specifically, an image fingerprint vector is extracted from the image, the components of which are simple statistical parameters associated to the luminance values in some selected circular areas of the image. The positions and radius of these bubbles result from a random selection, with characteristics defined by the user. In this way, the extracted fingerprint is very robust with respect to linear and nonlinear distortion of the image. Experiments based on the detection of various linearly and nonlinearly distorted versions of a test image in a large database have shown very promising results.