

CONIC SECTIONS IN CHROMOSOME ANALYSIS

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ABSTRACT

The paper describes a technique for processing alpha-numeric characters to remove variations of position, size and orientation. The basis of the technique is the autocorrelation function, which is generated by comparing the character with itself for all possible displacements of the character, and which is independent of the position of the character. This function is then logarithmically transformed in such a way that changes in size of the character cause a linear displacement of the logarithmic function in the horizontal plane, whereas rotational movements cause the function to be displaced in the vertical plane. A second autocorrelation function is generated from this logarithmic function which removes the effects of these displacements and gives an output independent of the size and position and orientation of the character. The output from this sequence is then passed through a form of optimum filter which at present is used to distinguish between pairs of similar characters, but which in principle is extendable to distinguish any letter from a given class of characters.