

# Estimating the vessel parameters using a three-dimensional local fan transform

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## Abstract

The article deals with a three-dimensional local fan transform within the problem of identifying the structure of a tree-like object. This transform is a modification of the ray transform reduced to a form that is convenient for the analysis of tree-like structures. A method of determining the vessel branch direction is developed on the basis of the proposed transform. The article also describes a method of determining the vessel structure. The proposed methods and algorithms are investigated experimentally.

**Keywords:** tree-like object, ray transform, vessel branch, vessel structure.

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