STRUCTURE PRESERVING REGULARIZATION OF DT−MRI VECTOR FIELDS BY NONLINEAR ANISOTROPIC DIFFUSION FILTERING (ThuPmOR2)

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Abstract :

In this paper, we propose a PDE−based method for structure preserving regularization of DT−MRI principal diffusion vector fields. We defined a structure sensitive function, the so−called regularity map, which is derived from the local orientation similarity. Regularizing tensor is based on vector field only. Regularization results are found quite satisfactory, in that even simple tracking algorithms accurately reveal the fiber streams in synthetic DTI data.

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