A novel scheme for anisotropic diffusion driven by the image autocorrelation function is implemented. The diffusion tensor field is estimated by autocorrelation and computation from a scalar product of diffusion tensor and the image Hessian functions obtains an evolution equation. For a minimized spatial support for a hessian a set of filters are proposed. The filtering method performs favorable in many cases in particularly at low noise levels. A real time performance is easily achieved in a GPU implementation.

References

Implementation of Improved Realtime Offline Image Filtering Method by Autocorrelation Function

Index Terms

Computer Science  Emerging Trends in Technology

Keywords

Adaptive Filtering  Diffusion Filtering  Image Enhancement  Steerable Filters  Structure  Tensor