عنوان مقاله:

A Bayesian approach for image denoising in MRI

محل انتشار:

پنجمین کنفرانس ملی تکنولوژی در مهندسی برق و کامپیوتر (سال: 1399)

تعداد صفحات اصل مقاله: 5

نویسندگان:

Mitra Tavakkoli - *Electrical and Computer Engineering Babol Noshirvani University of Technology Babol, Iran*

Seyed Javad Kazemitabar - *Department of Electrical Engineering Babol Noshirvani University of Technology Babol, Iran*

خلاصه مقاله:

Magnetic Resonance Imaging (MRI) is a notable medical imaging technique that is based on nuclear magnetic resonance (NMR). MRI is a safe imaging method with high contrast between soft tissues, which made it the most popular imaging technique in clinical applications. The visual quality of MRI plays an important role in accuracy of medical diagnostic that can be severely corrupted by existing noise during the acquisition process. Therefore, denoising of these images has great importance in medical applications. The noise in MRI systems is usually demonstrated by Rician distribution, which causes a signal-dependent bias and reduces the image quality and contrast. The propose of this study is to find an appropriate prior distribution for noiseless MR signal and use Bayesian estimation as a noise reduction method that has lower computational complexity compared with other statistical approaches.

کلمات کلیدی:

Bayesian estimation, Rician distribution, Magnetic Resonance Imaging