

Abstract Submitted  
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**Computational and Physical Analysis for Bioimage Processing to Increase the Quality of the Image** KYOUNGWAN WOO, Phillips Exeter Academy, RICHARD KYUNG, CRG-NJ — Magnetic Resonance Imaging technique is commonly used to improve the quality of the image of the subjects anatomy through mathematical and physical transformation. The data for the image is composed of numerical arrays and the information is first transformed into a frequency space. The space is transformed into an image domain through a transformation called Fourier Transformation. In this paper, various numerical filter functions were applied using computer programming as low pass filters to create better images. All the different types of functions as filters showed their distinct features and were compared to one another. A non-conventional approach and trial and error were employed while filters were tested on the full K-space in order to find the efficient filter, The proposed filters were different from the classical square function and the Gaussian function having a few advantages or properties over the old functions.

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