

Abstract Submitted
for the MAS16 Meeting of
The American Physical Society

Bio-image and Histogram Analysis of Human Bone Using Numerical and Computational Simulations JOO SUNG YI, SEONG HYEON LEE, JIWOO YOO, Choice Research Group — Magnetic resonance imaging is a commonly used technique to produce an image of the anatomy of the subject through the use of radio waves, magnetism and computers. The data for the image is first transmitted as a k-space diagram, which is changed into an image through the Fourier Transformation. The images produced by MRI are accurate, and clear. However, there exist some drawbacks to the technology in that MRI produces clear, and rich representations of the area imaged, therefore takes a long production time. Time consumption is mainly caused by MRIs use of every data in spatial frequency. In this paper, the histograms of the human bones were analyzed to distribute and enhance the image contrast toward more even colors. With the histograms obtained through the MatLab, the severity of the condition can be assessed, and specific levels of severities may have specific patterns to their respective histograms. The purpose of the present research is to develop a better algorithm, a more compatible Fourier Transformation equation in order to increase the resolution of the bio-image.

Richard Kyung
Choice Research Group

Date submitted: 06 Oct 2016

Electronic form version 1.4