

From imaging algorithms to quantum methods Seminar

Report of Contributions

Contribution ID : 1

Type : **not specified**

Simulation of Beam Hardening Effect in CT

Monday, 17 March 2025 10:00 (60)

Beam hardening is the phenomenon that occurs when an x-ray beam comprised of polychromatic energies passes through an object, resulting in selective attenuation of lower energy photons. The effect is conceptually similar to a high-pass filter in that only higher energy photons are left to contribute to the beam, and thus, the mean beam energy is increased ("hardened").

In this talk, we will present effects of beam hardening for CT imaging of samples with different materials. We will describe a simulation approach easily applicable to standard pipeline for generation of synthetic CT images. Finally we will discuss Beam Hardening correction methods together with metrics used to quantify the quality of corrections.

Presenter(s) : ZAJKOWSKI, Maciej (NCBJ)

Contribution ID : 2

Type : **not specified**

Discussion

Monday, 17 March 2025 11:00 (30)