



JOHNS HOPKINS

WHITING SCHOOL
of ENGINEERING

Applied Medical Image Processing

Introduction

Introduction

Data Acquisition

- Signal detection and digitization of acquired raw data

Reconstruction

- Algorithms to convert raw data to image pixel value

Enhancement

- Techniques to improve image interpretability (denoising, contrast enhancement, ...)

Analysis

- Techniques to extract information from images (segmentation, registration, structural/functional modeling.)

Visualization

- Data rendering to present anatomical and functional data

Management

- Data storage, retrieval, communication, privacy

Outline

- Compute Tomography Reconstruction
 - Algebraic Reconstruction Algorithm
- Radon Transform
 - Line integral
 - Definition
 - Properties



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