

Fan-Beam Computerized Tomography Simulation

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Abstract—This project report demonstrates the implementation of Fan Beam Computerized Tomography simulation. The effect of different design parameters including the length of the detector, the number of beams and the angle between consecutive projections is inspected and discussed comparatively in both quantitative and qualitative manner. The developed code and GUI to run it can be found in github.com/kutay-ugurlu/Fan-Beam-Computerized-Tomography-Simulation

Index Terms—imaging, medical imaging, X-Ray computerized tomography, image reconstruction

I. Introduction

Introduction paragraph on ECGI and its clinical significance.

Need for regularization and significance of statistical estimation methods for solving the inverse problem ... Brief literature review (no details, just examples)... Challenges ...

Our approach and novelty of the paper.