

Stellingen

behorende bij het proefschrift

Iteratieve reconstructie met bewegingscorrectie voor cardiale Röntgen-CT-beeldvorming

Alfonso A. Isola, juni 2010.

1. Compared to ECG-gated iterative image CT reconstruction, cardiac-motion compensated iterative CT reconstruction yields images with reduced motion blurring artifacts, higher SNR, increased temporal resolution and lower dose to the patient (*Chapters 2-5 of this thesis*).
2. The divergence in the cardiac motion field should be taken into account during image reconstruction to avoid streak artifacts and dark stains which could hamper the visualization of the coronary arteries and the heart chambers (*Chapters 2-5 of this thesis*).
3. Manual coronary artery motion tracking can be a simple and efficient means to estimate the unknown local motion of the coronary vessels (*Chapter 3 of this thesis*).
4. More accurate and robust coronary artery motion estimation can be achieved using semi-automatic coronary centerline extraction methodologies. (*Chapter 4 of this thesis*).
5. A non-rigid registration-based method for locally estimating cardiac motion can be used for fully automatic motion compensated cardiac image reconstruction. (*Chapter 5 of this thesis*).
6. If you cannot explain it simply, you do not understand it well enough (*Albert Einstein*).
7. The opposite of a correct statement is a false statement. The opposite of a profound truth may well be another profound truth (*Niels Bohr*).
8. Doing research in a medical center does not automatically improve ones own health.
9. Progress imposes not only new possibilities for the future but new restrictions (*Norbert Wiener*).
10. All exact science is dominated by the idea of approximation (*Bertrand Russell*).
11. Freedom is not worth having if it does not include the freedom to make mistakes (*Mahatma Gandhi*).