

3.40 Cardiac Imaging

Keywords

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Functional description

Development of imaging protocols and reconstruction algorithms for 3D cardiac imaging.

Innovative aspects

- Volumetric and dynamic imaging of the heart
- Extraction of cardiac function parameters
- Minimal user interaction

Commercial application examples

- Combined microscopy-software tools for live biological imaging
- 3D image reconstruction from multiple views

More information

Software & IPR status

The underlying software consists of a set of *Matlab*, *C*, and *Java* tools to perform problem-specific microscopy acquisition protocols, digital image reconstruction of dynamic 3D volumes, analysis and display routines.

Note on IPR: Ongoing efforts, part of software suite was developed while at Caltech and UCSB. Some of the methods are covered by patent:

M. Dickinson, A. Farouhar, S. E. Fraser, M. Gharib, and M. Liebling, “Four-dimensional imaging of periodically moving objects via post-acquisition synchronization of nongated slice-sequences,” U.S. Patent No. 7,372,984, May 13, 2008.