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Image analysis methods for dynamic hepatocyte-specific contrast enhanced MRI

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Propositions

accompanying the dissertation

IMAGE ANALYSIS METHODS FOR DYNAMIC HEPATOCYTE-SPECIFIC CONTRAST ENHANCED MRI

by

Tian ZHANG

1. Applying a region of interest that includes the liver to registration of DHCE MR images improves the accuracy since there is less weight of an invalid smoothness constraint. (this thesis)

2. Signal fluctuations in time intensity curves (TICs) extracted from DCE-MRI voxels of the liver caused by a varying flip-angle can be corrected based on the liver displacement. (this thesis)

3. Pharmacokinetic modeling of DCE-MRI with Gd-EOB-DTPA can replace ^{99m}TC-HBS as the primary clinical tool to assess future remnant liver functionality. (this thesis)

4. Voxel-wise Pearson correlation of time intensity curves (TICs) improves the segmentation accuracy of thin arteries in 4D DCE-MR series of the liver. (this thesis)

5. Tuning complexity is a key criterion in evaluating a registration algorithm.

6. Online social networks not only make establishing friendships easier, but also ending them.

7. Moving abroad to obtain your PhD comes with two culture shocks: the day you go abroad and the day you return home.

8. Attending time management courses is a waste of time.

9. Good supervisors promote that students express their ideas, even if the student is in doubt about the quality.

10. Neither a supervisor nor a co-supervisor should be required to approve the propositions accompanying a PhD thesis.

These propositions are regarded as opposable and defendable, and have been approved as such by the promoters prof. dr. L.J. van Vliet, prof. dr. J. Stoker, dr. F.M. Vos and dr. C. Lavini.