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Pattern Recognition in High-Throughput Zebrafish Imaging

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Stellingen

Behorende bij het proefschrift

PATTERN RECOGNITION IN HIGH-THROUGHPUT ZEBRAFISH IMAGING

1. Automated image analysis is the last hurdle in the High Throughput pipeline.
this thesis, Chapter 1.
2. The anchor region based template matching approach provides a reliable, objective and fast solution for the analysis of zebrafish screens.
this thesis, Chapter 3.
3. For biological objects, results obtained from a scale independent deformable template representation are better compared to results obtained from a contour based representation.
this thesis, Chapter 6.
4. A solution for High Throughput imaging in zebrafish research must be able to deal with a variation in shape and size of the objects as well as variations in imaging conditions in the images.
this thesis, Chapter 3.
5. Region based analysis of infection provides meaningful patterns for the understanding of infection mechanisms.
this thesis, Chapter 5.
6. Normalization of the representation of a biological object is required for data mining of biological data.
this thesis, Chapter 5.
7. Mutant bacteria can be characterized based on their infection phenotype.
this thesis, Chapter 5.
8. A combination of top-down and bottom-up segmentation methods is required for a thorough understanding of image content.
this thesis, Chapter 2.
9. Interpretation of spatial information alone is often more complicated than spatial temporal images of a lower resolution.
10. Founding a spin off company as a continuation of a phd project requires a great amount of ambition, yet it is always worth a chance.
11. Based on tunnel depth Saint-Petersburg metro system is the deepest in the world.