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Stellingen

behorende bij het proefschrift

Model-Based Cell Tracking and Analysis in Fluorescence Microscopy

Oleh Dzyubachyk, Januari 2011

1. Optimal progress in modern biology is achieved by a close collaboration between biologists, chemists, physicists, mathematicians, statisticians, and computer scientists (*this thesis*)
2. There are no universal solutions to tracking problems in cell and developmental biology: every specific problem requires its own dedicated solutions (*this thesis*)
3. Using mathematical methods helps to better analyze fluorescence microscopy data and provides theoretical basis for this kind of image analysis (*this thesis*)
4. Using a model-evolution-based method enables incorporating into the segmentation of each time step all the currently available information (*this thesis*)
5. Performing analyses on individual cells presents evident advantages over the averaging over the whole cell population (*this thesis*)
6. Experience without theory is blind, but theory without experience is mere intellectual play (*Immanuel Kant*)
7. To know yet to think that one does not know is best. Not to know yet to think that one knows will lead to difficulty (*Lao Tzu*)
8. Nothing is more fairly distributed than common sense: no one thinks he needs more of it than he already has (*Rene Descartes*)
9. One can imagine that the ultimate mathematician is one who can see analogies between analogies (*Stefan Banach*)
10. Pleasure in the job puts perfection in the work (*Aristotle*)
11. The time you enjoy wasting is not wasted time (*Bertrand Russell*)