Daniel Sage: Signal-processing algorithms for bioimaging

Abstract

Automatic processing of microscopic images remains a challenging task for the image-processing community, one has to handle multidimensional data often corrupted by a defocussing effect, non-uniform lightning, or important noisy and to deal with living particles that rapidly move, grow, interact, or divide. In this poster, we describe several algorithms for restoration (denoising and deconvolution) and for image analysis (photobleaching, directional analysis and tracking) of biological organisms. These algorithms have been developed as Java plugins for ImageJ by members of the Biomedical Imaging Group. While they are based on solid signal-processing fundaments, they are made available and accessible to end-users.

Keywords

Microscopy, multidimensional data, image restoration, image analysis

Administrative data

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