

Mobyle@SERPICO: Image processing methods for the temporal analysis of moving particles on a Mobyle Web Portal

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The SERPICO team (INRIA Rennes – Bretagne Atlantique), in collaboration with UMR 144 CNRS

Institut Curie (“Subcellular Structure and Cellular Dynamics” Unit / PICT – IbiSA) and Nikon Imaging Centre@Institut Curie, has developed mathematical tools and algorithms to analyze the dynamic coordination and organization of molecular complexes at the single cell level. Several of these methods are accessible through a Mobyle web portal (<http://mobyle-serpico.rennes.inria.fr/>).

This platform allows any user to apply state-of-the-art denoising, segmentation, object/background separation and optical flow algorithms to their own image/volume sequences in the cloud.

Mobyle@SERPICO

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SERPICO team (INRIA Rennes - Bretagne Atlantique) is partner of France-BioImaging

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Programs


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Tutorials

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Welcome to Mobyle, a portal for bioinformatics analyses

Space timE RePresentation, Imaging
and cellular dynamics of molecular
Complexes





Programs available

- ATLAS:** Vesicle segmentation method
- Backwarping:** Warp sequence with parametric motion model
- C-CRAFT:** Vesicle segmentation and background estimation
- CRFMovingSpotDetection:** Detecting moving spots/vesicles using Conditional Random Fields
- HotSpotDetection:** Robust detection of fluorescence accumulation over time in video-microscopy
- HulkGround:** Separation of moving and non moving part in a sequence
- KLTracker:** Track vesicle and POI in image sequences
- Motion2D:** Estimate 2D parametric motion model
- MS-Detect:** Detecting moving objects in image sequences by background subtraction
- ND-SAFIR:** Denoise N-Dimensional images
- Optical-flow:** Compute Optical Flow between 2 images
- OpticalFlowStack:** Compute Optical Flow between each pair of images in a TIFF stack

Credits

Mobyle is a platform developed jointly by the Institut Pasteur Biology IT Center and the Ressource Parisienne en Bioinformatique Structurale.
More information about this project can be found here.

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