

A grayscale microscopic image showing a dense field of small, dark, irregularly shaped particles. The particles are distributed across the frame, with some appearing as distinct, bright spots and others as faint, blurry shapes. The overall appearance is that of a complex, granular material.

# ParticleTR

a particle tracking and  
analysis software

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A particle tracking and analysis software which can be used to track moving objects in time lapse images

ParticleTR is a particle tracking and analysis software which can be used to track moving objects in time lapse images.

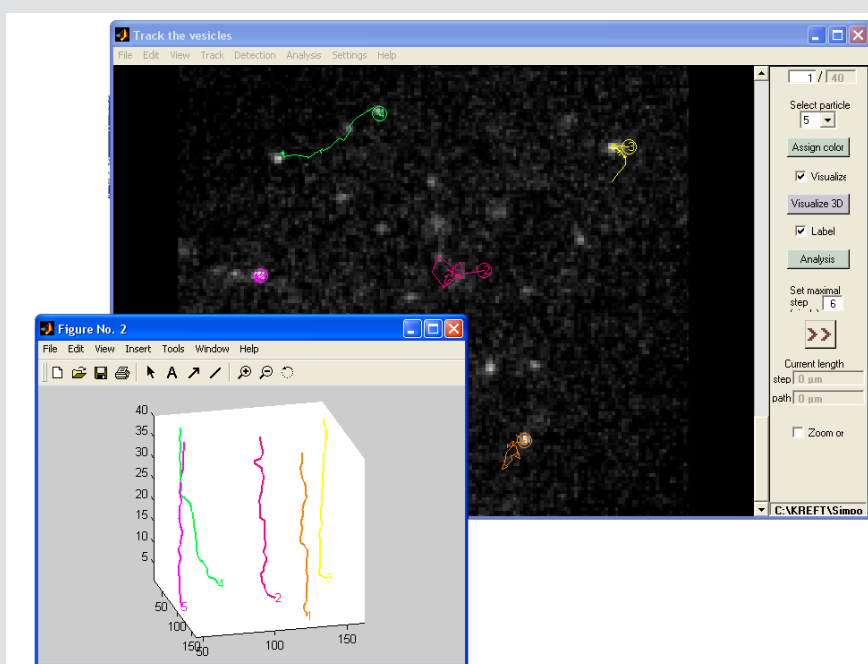
The algorithm is based on fitting of a two-dimensional Gaussian curve to a specified region of the image.

ParticleTR is a menu driven program for automatic tracking of particles in time lapse images. The level of user interaction can be selected.

ParticleTR provides tools to analyze and visualize results in 2D and 3D line charts. Software calculates several parameters for each particle, such as: the total length of the trajectory, the total motion time, the average speed, the displacement and the index of displacement/total length of the trajectory. Software also calculates parameters of each frame for all particles analyzed: current time, step length, cumulative length, squared displacement and speed.

## Major features:

- Automatic tracking of particles in a series of time lapse images.
- Verification of tracked coordinates and interactive determination of coordinates.
- Calibration of time and spatial dimensions.
- Visualization of trajectories in 2D and 3D line charts.
- Analysis of trajectories and line chart visualization of calculated parameters.
- Zoom of image series to a specified region.
- Intuitive user interface.
- Export of trajectories and calculated parameters to an ASCII file.
- Export of images together with trajectories to an AVI file.





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