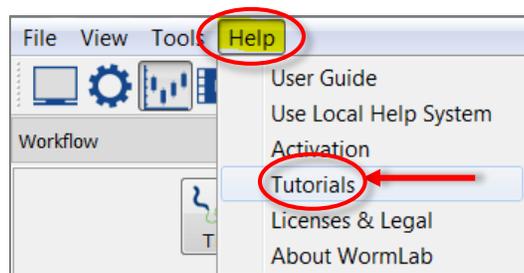


# WormLab® Tutorial

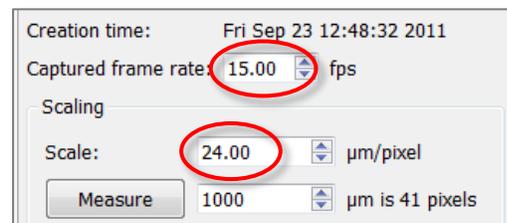
## Tutorial: Tracking worms

In this tutorial, we will use the sample video *FiveWorms.avi* to learn the basic steps for tracking and analyzing crawling worms.

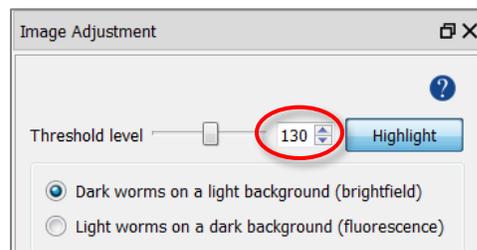
1. Start WormLab.
2. Open the *FiveWorms.avi* video.
  - a. Click **Help>Tutorials**.
  - b. In the *Tutorials* folder, open the *Video* folder.
  - c. Drag the *FiveWorms.avi* file into the WormLab main window (area with the MBF logo).



3. In the workflow, click **Set Sequence Info**.
  - a. Set the **Captured framerate** to 15fps.
  - b. Set the **Scaling** to 24  $\mu\text{m}/\text{pixel}$ .
  - c. Click **Save**.

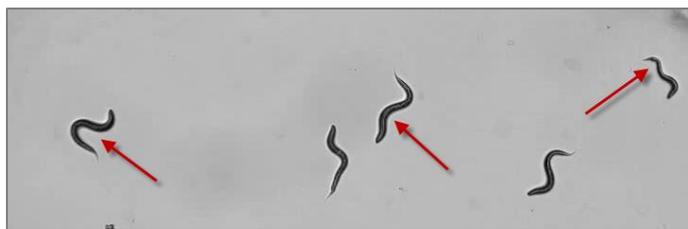


4. Click **Adjust Image**.
  - a. Set the **Threshold Level** to 130.
  - b. Click **Apply**.

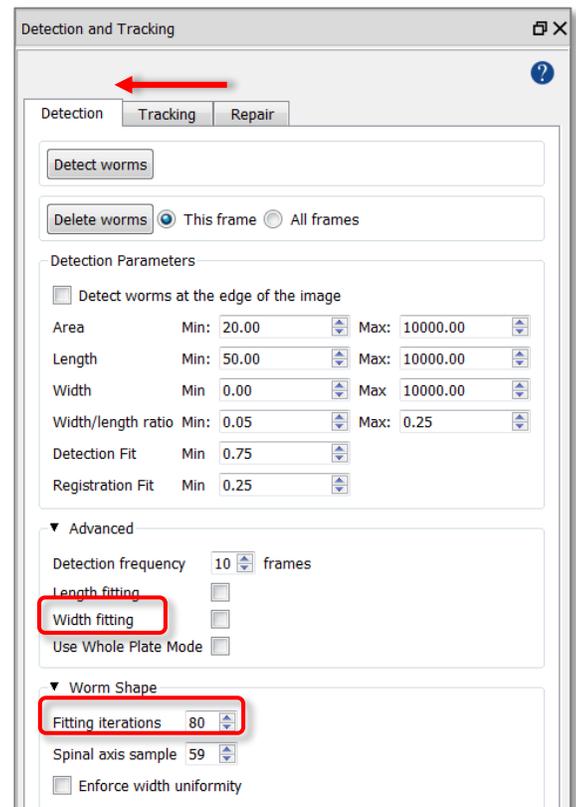


5. In the workflow, Click **Detect and Track** to open the **Detection and Tracking** panel.

In the tracking window, click the three worms indicated by the red arrows to select them. WormLab overlays the selected worms in green.

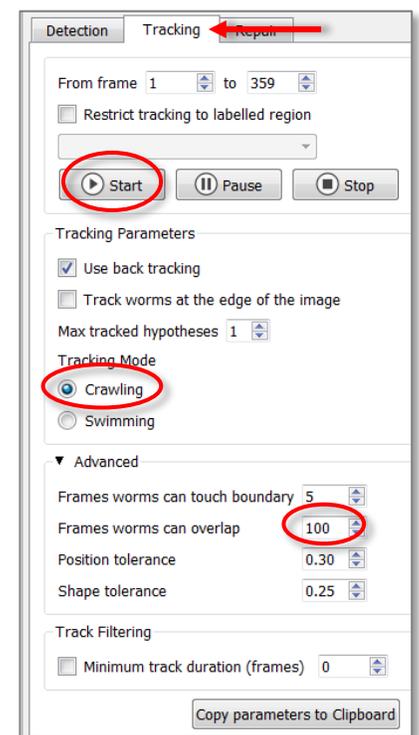


6. Select the **Detection** tab.
  - a. Click the **Advanced** heading and uncheck the **Width Fitting** checkbox.
  - b. Click the **Worm Shape** heading and set the **Fitting iterations** to 80.



7. Click the **Tracking** tab. Crawling (under **Tracking Mode**) should be selected.
  - a. Click the **Advanced** heading and set **Frames worms can overlap** to 100.
  - b. Click the **Start** button (at the top of the panel) to begin tracking.

Note: WormLab tracks the five worms, performing forward and backward tracking and ending back at frame #1.

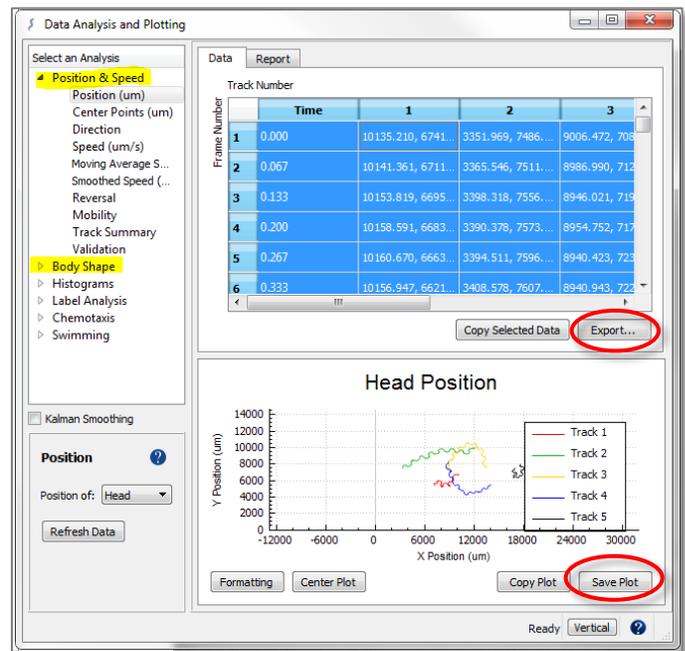


8. In the workflow, click **Analyze Data** to display the **Data Analysis and Plotting** window.

- Click the name of an analysis under **Position & Speed** or **Body Shape** on the left.
- Click the **Export** button to export the data table.

If MS Excel is installed: Data is automatically loaded into Excel.

If you don't have MS Excel: You're prompted to select a program to open the exported .CSV file.



9. In the workflow, click **Save Project**, enter a file name, then click **Save**.

Questions or Problems?

Contact MBF Customer Support: (802) 288 9290 or [support@mbfbioscience.com](mailto:support@mbfbioscience.com)