

Description of the data structure

main dictionary : {str (frame name) : {str (property) : obj}}. List of properties :

- 'time' (int) : time after the 1st frame
- 'adress' (str) : path from project root to the images (see data files)
- 'masks' np [[int32]] : labelled masks, background is 0
- 'masks_error' (bool) : error in mask detection in the frame
- 'outlines' [np [[coords i, coords j]]] : list of the outlines of the masks, ordered by masks labels (first element is the outline of the mask 1)
- 'angle' (float) : rotation angle of the images in radian (0 in our case)
- 'centroid' np[(int32 i, int32 j)] : list of the barycenters of the masks, ordered by masks labels
- 'area' np [int32] : pixel area of each masks, ordered by masks labels
- 'main_centroid' np [int32 i, int32 j] : main centroid coordinates
- 'parent' (str) : previous frame without error, can be ""
- 'child' (str) : next frame without error, can be ""
- 'masks_list' [int] : label of each mask in the whole dataset (see mask_number in masks_list)

ROI_dict : { str (ROI name) : {str (property) : obj}}. List of properties :

- 'Parent' (str) : name of the parent ROI
- 'Children' [str] : list of name of the children ROI, can be empty and has 2 elem max
- 'Mask IDs' [int] : list of the mask_numbers (see masks_list) of the masks composing the ROI, ordered in time
- 'index' (str, 'int/{0,1}+') : biological index of the ROI
- 'color_index' (int) : used for the plots

masks_list (inverse function of the main dictionary) np object array (n by 4): mask_number \mapsto [mask_number (int), dataset name (str), frame name (str), label of the mask in the frame (int)] nb : mask of index i has the number i+1 in the array 'masks'

masks_ROI_list (inverse function of the ROI dictionary) np object array (n by 3): mask_number \mapsto [color_index (int), 'index' (str, 'int/{0,1}+'), ROI name (str)]

data files [REDACTED] .npz files for the dictionaries and lists
Import of the dictionaries : `np.load(dic, allow_pickle=True)['arr_0'].item()`
Import of the lists : `np.load(dic, allow_pickle=True)['arr_0']`