

PyFRAP

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# Chapter 1

## Hierarchical Index

### 1.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

embryo.embryo . . . . .	11
embryo.fit . . . . .	14
InteractiveInterpreter	
pyfrp_term.PyInterp.InteractiveInterpreter . . . . .	21
molecule.molecule . . . . .	21
pyfrp_conf.pyfrp_conf . . . . .	28
QDialog	
pyfrp_subwin.about_dialog . . . . .	5
pyfrp_subwin.analysis_dialog . . . . .	5
pyfrp_subwin.analyze_all_prog . . . . .	6
pyfrp_subwin.analyze_prog . . . . .	8
pyfrp_subwin.dataset_dialog . . . . .	9
pyfrp_subwin.fit_dialog . . . . .	15
pyfrp_subwin.fitting_prog . . . . .	18
pyfrp_subwin.geometry_dialog . . . . .	19
pyfrp_subwin.molecule_dialog . . . . .	22
pyfrp_subwin.mult_fit_dialog . . . . .	22
pyfrp_subwin.select_fits . . . . .	29
pyfrp_subwin.sim_dialog . . . . .	30
pyfrp_subwin.simulation_prog . . . . .	32
QMainWindow	
pyfrp_app.pyfrp . . . . .	25
QTextEdit	
pyfrp_term.PyInterp . . . . .	28
QThread	
pyfrp_subwin.analyze_all_thread . . . . .	7
pyfrp_subwin.analyze_thread . . . . .	8
pyfrp_subwin.fitting_mol_thread . . . . .	18
pyfrp_subwin.fitting_thread . . . . .	19
pyfrp_subwin.simulation_thread . . . . .	32



## Chapter 2

# Class Index

### 2.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

<a href="#">pyfrp_subwin.about_dialog</a>	5
<a href="#">pyfrp_subwin.analysis_dialog</a>	5
<a href="#">pyfrp_subwin.analyze_all_prog</a>	6
<a href="#">pyfrp_subwin.analyze_all_thread</a>	7
<a href="#">pyfrp_subwin.analyze_prog</a>	8
<a href="#">pyfrp_subwin.analyze_thread</a>	8
<a href="#">pyfrp_subwin.dataset_dialog</a>	9
<a href="#">embryo.embryo</a>	11
<a href="#">embryo.fit</a>	14
<a href="#">pyfrp_subwin.fit_dialog</a>	15
<a href="#">pyfrp_subwin.fitting_mol_thread</a>	18
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<a href="#">pyfrp_subwin.fitting_thread</a>	19
<a href="#">pyfrp_subwin.geometry_dialog</a>	19
<a href="#">pyfrp_term.PyInterp.InteractiveInterpreter</a>	21
<a href="#">molecule.molecule</a>	21
<a href="#">pyfrp_subwin.molecule_dialog</a>	22
<a href="#">pyfrp_subwin.mult_fit_dialog</a>	22
<a href="#">pyfrp_app.pyfrp</a>	25
<a href="#">pyfrp_conf.pyfrp_conf</a>	28
<a href="#">pyfrp_term.PyInterp</a>	28
<a href="#">pyfrp_subwin.select_fits</a>	29
<a href="#">pyfrp_subwin.sim_dialog</a>	30
<a href="#">pyfrp_subwin.simulation_prog</a>	32
<a href="#">pyfrp_subwin.simulation_thread</a>	32



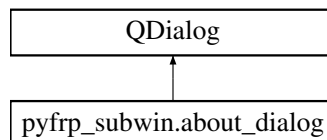


## Chapter 3

# Class Documentation

### 3.1 pyfrp\_subwin.about\_dialog Class Reference

Inheritance diagram for pyfrp\_subwin.about\_dialog:



#### Public Member Functions

- `def __init__`
- `def OpenURL`
- `def cancel`

#### Public Attributes

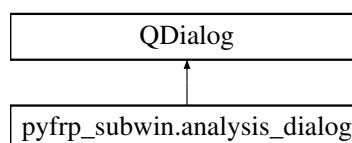
- `lbl_name`
- `lbl_author`
- `lbl_website`
- `btn_cancel`
- `vbox`

The documentation for this class was generated from the following file:

- `/home/alex_loc/Documents/Research/PyFRAP/Code/pyfrp_subwin.py`

### 3.2 pyfrp\_subwin.analysis\_dialog Class Reference

Inheritance diagram for pyfrp\_subwin.analysis\_dialog:



## Public Member Functions

- def `__init__`
- def `check_norm_by_pre`
- def `check_img_in_domain`
- def `check_add_rim`
- def `check_add_rim_from_radius`
- def `check_conc_rim`
- def `check_debug`
- def `set_conc_rim`
- def `set_rim`
- def `set_preimage`
- def `done_pressed`

## Public Attributes

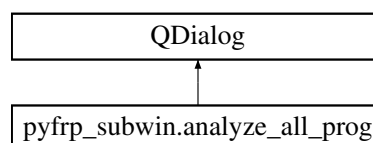
- `embryo`
- `btn_done`
- `btn_preimage`
- `lbl_pre`
- `lbl_rim_handling`
- `lbl_debugging`
- `lbl_rim`
- `lbl_norm_by_pre`
- `lbl_preimage`
- `lbl_img_in_domain`
- `lbl_add_rim_from_radius`
- `lbl_add_rim`
- `lbl_debug`
- `lbl_use_conc_rim`
- `lbl_conc_rim`
- `cb_debug`
- `cb_img_in_domain`
- `cb_add_rim`
- `cb_add_rim_from_radius`
- `cb_conc_rim`
- `cb_norm_by_pre`
- `qle_conc_rim`
- `qle_rim`
- `double_valid`

The documentation for this class was generated from the following file:

- `/home/alex_loc/Documents/Research/PyFRAP/Code/pyfrp_subwin.py`

## 3.3 pyfrp\_subwin.analyze\_all\_prog Class Reference

Inheritance diagram for `pyfrp_subwin.analyze_all_prog`:



### Public Member Functions

- def **\_\_init\_\_**
- def **cancel\_analysis**

### Public Attributes

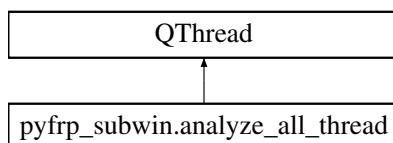
- **molecule**
- **lbl\_name**
- **btn\_cancel**
- **progressbar**
- **vbox**

The documentation for this class was generated from the following file:

- /home/alex\_loc/Documents/Research/PyFRAP/Code/pyfrp\_subwin.py

## 3.4 pyfrp\_subwin.analyze\_all\_thread Class Reference

Inheritance diagram for pyfrp\_subwin.analyze\_all\_thread:



### Public Member Functions

- def **\_\_init\_\_**
- def **\_\_del\_\_**
- def **run**

### Public Attributes

- **molecule**

### Static Public Attributes

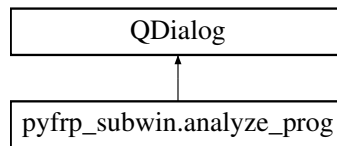
- tuple **taskFinished** = `QtCore.pyqtSignal()`
- tuple **prog\_signal** = `QtCore.pyqtSignal(int,int)`

The documentation for this class was generated from the following file:

- /home/alex\_loc/Documents/Research/PyFRAP/Code/pyfrp\_subwin.py

### 3.5 pyfrp\_subwin.analyze\_prog Class Reference

Inheritance diagram for pyfrp\_subwin.analyze\_prog:



#### Public Member Functions

- `def __init__`
- `def cancel_analysis`

#### Public Attributes

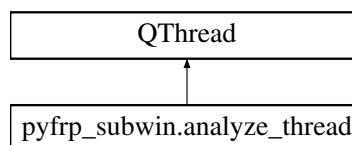
- `lbl_name`
- `btn_cancel`
- `progressbar`
- `vbox`

The documentation for this class was generated from the following file:

- `/home/alex_loc/Documents/Research/PyFRAP/Code/pyfrp_subwin.py`

### 3.6 pyfrp\_subwin.analyze\_thread Class Reference

Inheritance diagram for pyfrp\_subwin.analyze\_thread:



#### Public Member Functions

- `def __init__`
- `def __del__`
- `def run`

#### Public Attributes

- `embryo`

### Static Public Attributes

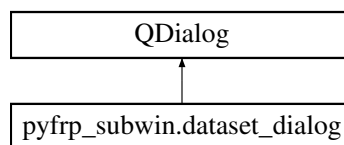
- tuple **taskFinished** = QtCore.pyqtSignal()
- tuple **prog\_signal** = QtCore.pyqtSignal(int)

The documentation for this class was generated from the following file:

- /home/alex\_loc/Documents/Research/PyFRAP/Code/pyfrp\_subwin.py

## 3.7 pyfrp\_subwin.dataset\_dialog Class Reference

Inheritance diagram for pyfrp\_subwin.dataset\_dialog:



### Public Member Functions

- def **\_\_init\_\_**
- def **create\_frame**
- def **sel\_datafolder**
- def **sel\_ft**
- def **sel\_enc**
- def **set\_name**
- def **set\_framerate**
- def **set\_tstart**
- def **set\_res**
- def **set\_radius**
- def **set\_center\_x**
- def **set\_center\_y**
- def **set\_sidelength**
- def **set\_offset\_x**
- def **set\_offset\_y**
- def **update\_tvec**
- def **update\_qles**
- def **create\_canvas**
- def **draw\_patches**
- def **show\_img**
- def **get\_mouse\_embr\_radius**
- def **clear\_patch\_canvas**
- def **clear\_patch\_canvas\_squ**
- def **done\_pressed**

## Public Attributes

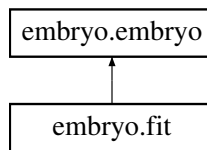
- embryo
- dpi
- xcoords2
- ycoords2
- xcoords
- ycoords
- pts\_in\_ax
- pts\_in\_ax2
- btn\_done
- btn\_set\_datafolder
- lbl\_name
- lbl\_name\_datafolder
- lbl\_name\_ft
- lbl\_name\_enc
- lbl\_name\_res
- lbl\_name\_radius
- lbl\_name\_center
- lbl\_name\_offset
- lbl\_name\_sidelength
- lbl\_name\_framerate
- lbl\_name\_nframes
- lbl\_name\_tstart
- lbl\_name\_tend
- lbl\_datafolder
- lbl\_tend
- lbl\_nframes
- combo\_ft
- combo\_enc
- qle\_name
- qle\_framerate
- qle\_tstart
- qle\_res
- qle\_radius
- qle\_center\_x
- qle\_center\_y
- qle\_offset\_x
- qle\_offset\_y
- qle\_sidelength
- double\_valid
- plot\_frame
- vbox
- hbox
- file\_list
- embr\_circ\_in\_ax
- bleached\_squ\_in\_ax
- fig
- canvas
- ax
- curr\_img\_ind

The documentation for this class was generated from the following file:

- /home/alex\_loc/Documents/Research/PyFRAP/Code/pyfrp\_subwin.py

## 3.8 embryo.embryo Class Reference

Inheritance diagram for embryo.embryo:



### Public Member Functions

- def **\_\_init\_\_**
- def **add\_fit**
- def **delete\_fit**
- def **save\_embryo**
- def **load\_embryo**
- def **copy\_embryo**
- def **plot\_sim\_data**
- def **plot\_sim**
- def **plot\_data**
- def **plot\_pinned**
- def **print\_embryo**
- def **plot\_IC\_img**

### Public Attributes

- **name**
- **mode**
- **dataset**
- **emb**
- **fn\_datafolder**
- **fn\_preimage**
- **fn\_resultfolder**
- **data\_enc**
- **data\_ft**
- **data\_res\_px**
- **conv\_fact**
- **framerate**
- **nframes**
- **tstart**
- **tend**
- **tvec\_data**
- **steps\_data**
- **dt\_data**
- **side\_length\_bleached\_mu**
- **fish\_outradius\_mu**
- **slice\_depth\_mu**
- **radius\_embr\_mu**
- **slice\_width\_mu**
- **cylinder\_radius\_mu**
- **cylinder\_height\_mu**
- **frog\_radius\_mu**

- slice\_width\_px
- slice\_depth\_px
- slice\_height\_px
- slice\_bottom
- center\_embr\_px
- side\_length\_bleached\_px
- offset\_bleached\_px
- radius\_embr\_px
- man\_det
- auto\_det
- parms\_det
- gauss\_opt
- surf\_opt
- add\_rim\_img
- squ\_av\_data\_d
- out\_av\_data\_d
- slice\_av\_data\_d
- im\_reg\_ICs
- rim
- debug\_analysis
- add\_rim\_from\_radius
- conc\_rim
- img\_in\_domain
- norm\_by\_pre
- phi\_IC\_rad
- phi\_IC\_rad\_mesh
- rad\_steps
- phi\_IC\_bleached
- debug\_preproc
- rad\_step\_px
- geometry
- fish\_outradius\_px
- fish\_inradius\_px
- fish\_dist\_px
- frog\_radius\_px
- cylinder\_radius\_px
- cylinder\_height\_px
- apply\_data
- D
- prod
- degr
- steps\_sim
- tvec\_sim
- avg\_mode
- add\_rim\_sim
- avg\_outer
- avg\_inner
- avg\_all
- avg\_pocket
- avg\_small
- squ\_av\_d
- out\_av\_d
- slice\_av\_d
- inner\_av\_d
- outer\_av\_d



- squ\_pocket\_av\_d
- out\_pocket\_av\_d
- squ\_small\_av\_d
- out\_small\_av\_d
- all\_av\_d
- volSize\_px
- fn\_mesh
- debug\_simulation
- mesh
- usemesh
- usemap
- mesh\_maps
- optim
- int\_steps
- integration\_method
- reg\_mesh\_opt
- res\_reg
- res\_wire
- debug\_reg
- mask\_squ
- mask\_out
- mask\_slice
- plot\_wire
- plot\_cont
- plot\_conc
- plot\_surf
- plot\_all
- out\_wire
- out\_cont
- out\_conc
- out\_surf
- out\_all
- squ\_av\_pm\_d
- out\_av\_pm\_d
- slice\_av\_pm\_d
- inner\_av\_pm\_d
- outer\_av\_pm\_d
- all\_av\_pm\_d
- squ\_pocket\_av\_pm\_d
- out\_pocket\_av\_pm\_d
- squ\_small\_av\_pm\_d
- out\_small\_av\_pm\_d
- debug\_pinning
- squ\_av\_pinned\_d
- out\_av\_pinned\_d
- slice\_av\_pinned\_d
- inner\_av\_pinned\_d
- outer\_av\_pinned\_d
- squ\_pocket\_av\_pinned\_d
- out\_pocket\_av\_pinned\_d
- squ\_small\_av\_pinned\_d
- out\_small\_av\_pinned\_d
- all\_av\_pinned\_d
- squ\_av\_data\_pinned\_d
- out\_av\_data\_pinned\_d

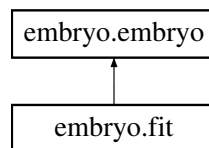
- **slice\_av\_data\_pinned\_d**
- **fit\_number**
- **fits**
- **debug\_fit**

The documentation for this class was generated from the following file:

- /home/alex\_loc/Documents/Research/PyFRAP/Code/embryo.py

### 3.9 embryo.fit Class Reference

Inheritance diagram for embryo.fit:



#### Public Member Functions

- def **\_\_init\_\_**
- def **print\_fit**
- def **print\_results**
- def **plot\_fit\_pinned**
- def **plot\_fit\_unpinned**
- def [save\\_plot\\_fit\\_pinned](#)  
*saves plot with simulation and data timeseries*
- def **save\_plot\_fit\_unpinned**

#### Public Attributes

- **fit\_number**
- **name**
- **embryo**
- **opt\_meth**
- **fit\_squ**
- **fit\_slice**
- **fit\_out**
- **fit\_prod**
- **fit\_degr**
- **equ\_on**
- **x0**
- **LB\_prod**
- **UB\_prod**
- **LB\_degr**
- **UB\_degr**
- **LB\_D**
- **UB\_D**
- **rate\_scale**
- **brute\_init**
- **debug\_fit**

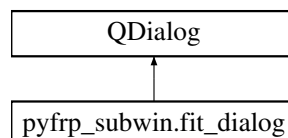
- maxfun
- opt\_tol
- fit\_pinned
- fit\_cut\_off\_t
- cut\_off\_t
- cut\_off\_step\_sim
- cut\_off\_step\_data
- save\_track
- track\_parms
- track\_squ\_fit
- track\_out\_fit
- track\_slice\_fit
- Rsq
- ssd
- D\_opt\_mu
- D\_opt\_px
- prod\_opt\_scaled
- degr\_opt\_scaled
- prod\_opt
- degr\_opt
- success
- squ\_equ\_fact
- out\_equ\_fact
- slice\_equ\_fact
- squ\_av\_scal\_d
- out\_av\_scal\_d
- slice\_av\_scal\_d
- squ\_av\_fitted\_d
- out\_av\_fitted\_d
- slice\_av\_fitted\_d
- tvec\_fit

The documentation for this class was generated from the following file:

- /home/alex\_loc/Documents/Research/PyFRAP/Code/embryo.py

### 3.10 pyfrp\_subwin.fit\_dialog Class Reference

Inheritance diagram for pyfrp\_subwin.fit\_dialog:



#### Public Member Functions

- def `__init__`
- def `set_name`
- def `set_opt_tol`
- def `set_maxfun`

- def **set\_x0\_D**
- def **set\_x0\_degr**
- def **set\_x0\_prod**
- def **set\_UB\_D**
- def **set\_UB\_degr**
- def **set\_UB\_prod**
- def **set\_LB\_D**
- def **set\_LB\_degr**
- def **set\_LB\_prod**
- def **set\_cut\_off\_t**
- def **sel\_meth**
- def **update\_bounds\_after\_meth**
- def **bounds\_for\_brute**
- def **check\_equ**
- def **check\_pin**
- def **check\_cut**
- def **check\_fit\_out**
- def **check\_fit\_slice**
- def **check\_fit\_squ**
- def **check\_fit\_degr**
- def **check\_fit\_prod**
- def **check\_debug\_fit**
- def **check\_save\_track**
- def **check\_bound\_LB\_D**
- def **check\_bound\_UB\_D**
- def **check\_bound\_LB\_degr**
- def **check\_bound\_UB\_degr**
- def **check\_bound\_LB\_prod**
- def **check\_bound\_UB\_prod**
- def **done\_pressed**

## Public Attributes

- **fit**
- **molecule**
- **embryo**
- **temp\_LB\_D**
- **temp\_UB\_D**
- **temp\_LB\_degr**
- **temp\_UB\_degr**
- **temp\_LB\_prod**
- **temp\_UB\_prod**
- **btn\_done**
- **lbl\_opt\_parms**
- **lbl\_guess**
- **lbl\_bounds**
- **lbl\_bounded**
- **lbl\_fitting**
- **lbl\_name**
- **lbl\_opt\_meth**
- **lbl\_opt\_tol**
- **lbl\_maxfun**
- **lbl\_save\_track**
- **lbl\_debug\_fit**

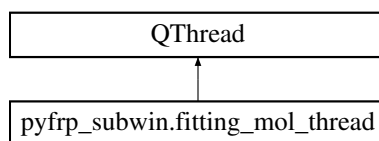
- lbl\_x0\_D
- lbl\_x0\_degr
- lbl\_x0\_prod
- lbl\_LB\_D
- lbl\_UB\_D
- lbl\_LB\_prod
- lbl\_UB\_prod
- lbl\_LB\_degr
- lbl\_UB\_degr
- lbl\_fit\_out
- lbl\_fit\_squ
- lbl\_fit\_slice
- lbl\_fit\_prod
- lbl\_fit\_degr
- lbl\_eq
- lbl\_pin
- lbl\_cut\_off
- lbl\_cut\_off\_t
- combo\_meth
- qle\_name
- qle\_opt\_tol
- qle\_maxfun
- qle\_x0\_D
- qle\_x0\_degr
- qle\_x0\_prod
- qle\_cut\_off\_t
- qle\_LB\_D
- qle\_UB\_D
- qle\_LB\_degr
- qle\_UB\_degr
- qle\_LB\_prod
- qle\_UB\_prod
- double\_valid
- cb\_debug\_fit
- cb\_save\_track
- cb\_bound\_LB\_D
- cb\_bound\_LB\_degr
- cb\_bound\_LB\_prod
- cb\_bound\_UB\_D
- cb\_bound\_UB\_degr
- cb\_bound\_UB\_prod
- cb\_fit\_out
- cb\_fit\_squ
- cb\_fit\_slice
- cb\_fit\_degr
- cb\_fit\_prod
- cb\_eq
- cb\_pin
- cb\_cut

The documentation for this class was generated from the following file:

- /home/alex\_loc/Documents/Research/PyFRAP/Code/pyfrp\_subwin.py

### 3.11 pyfrp\_subwin.fitting\_mol\_thread Class Reference

Inheritance diagram for pyfrp\_subwin.fitting\_mol\_thread:



#### Public Member Functions

- def `__init__`
- def `__del__`
- def `run`

#### Public Attributes

- `molecule`
- `gui`

#### Static Public Attributes

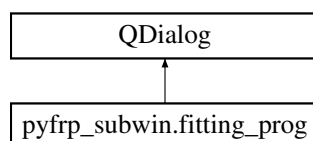
- tuple `taskFinished` = `QtCore.pyqtSignal()`

The documentation for this class was generated from the following file:

- `/home/alex_loc/Documents/Research/PyFRAP/Code/pyfrp_subwin.py`

### 3.12 pyfrp\_subwin.fitting\_prog Class Reference

Inheritance diagram for pyfrp\_subwin.fitting\_prog:



#### Public Member Functions

- def `__init__`
- def `cancel_fitting`

#### Public Attributes

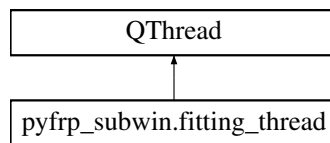
- `lbl_name`
- `btn_cancel`
- `vbox`

The documentation for this class was generated from the following file:

- /home/alex\_loc/Documents/Research/PyFRAP/Code/pyfrp\_subwin.py

### 3.13 pyfrp\_subwin.fitting\_thread Class Reference

Inheritance diagram for pyfrp\_subwin.fitting\_thread:



#### Public Member Functions

- def `__init__`
- def `__del__`
- def `run`

#### Public Attributes

- `embryo`
- `fit`
- `gui`

#### Static Public Attributes

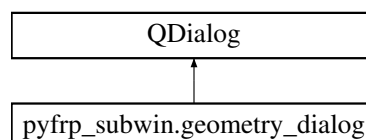
- tuple `taskFinished` = `QtCore.pyqtSignal()`

The documentation for this class was generated from the following file:

- /home/alex\_loc/Documents/Research/PyFRAP/Code/pyfrp\_subwin.py

### 3.14 pyfrp\_subwin.geometry\_dialog Class Reference

Inheritance diagram for pyfrp\_subwin.geometry\_dialog:



#### Public Member Functions

- def `__init__`
- def `create_frame`
- def `create_canvas`

- def **sel\_geom**
- def **check\_img\_in\_domain**
- def **set\_sliceheight**
- def **set\_fish\_outer\_radius**
- def **set\_frog\_radius**
- def **set\_cyl\_radius**
- def **set\_cyl\_height**
- def **build\_fish**
- def **build\_frog**
- def **build\_cylinder**
- def **plot\_fish**
- def **plot\_frog**
- def **plot\_cylinder**
- def **adjust\_zaxis**
- def **show\_img**
- def **done\_pressed**

### Public Attributes

- **embryo**
- **dpi**
- **btn\_done**
- **lbl\_geometry**
- **lbl\_img\_in\_domain**
- **lbl\_fish\_inner\_radius**
- **lbl\_fish\_outer\_radius**
- **lbl\_fish\_dist**
- **lbl\_cyl\_radius**
- **lbl\_cyl\_height**
- **lbl\_frog\_radius**
- **lbl\_slice\_height**
- **combo\_geom**
- **qle\_slice\_height**
- **qle\_fish\_inner\_radius**
- **qle\_fish\_outer\_radius**
- **qle\_fish\_dist**
- **qle\_frog\_radius**
- **qle\_cyl\_radius**
- **qle\_cyl\_height**
- **double\_valid**
- **cb\_img\_in\_domain**
- **plot\_frame**
- **vbox**
- **hbox**
- **fig**
- **canvas**
- **ax**
- **file\_list**

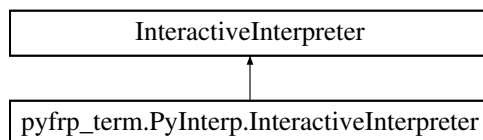
The documentation for this class was generated from the following file:

- `/home/alex_loc/Documents/Research/PyFRAP/Code/pyfrp_subwin.py`



## 3.15 pyfrp\_term.PyInterp.InteractiveInterpreter Class Reference

Inheritance diagram for pyfrp\_term.PyInterp.InteractiveInterpreter:



### Public Member Functions

- def **\_\_init\_\_**
- def **runIt**

The documentation for this class was generated from the following file:

- /home/alex\_loc/Documents/Research/PyFRAP/Code/pyfrp\_term.py

## 3.16 molecule.molecule Class Reference

### Public Member Functions

- def **\_\_init\_\_**
- def **add\_embryo**
- def **remove\_embryo**
- def **save\_molecule**
- def **load\_molecule**
- def **sumup\_results**

### Public Attributes

- **name**
- **embryos**
- **sel\_fits**
- **D\_mu\_av**
- **prod\_av**
- **degr\_av**
- **Rsq\_av**
- **ssd\_av**
- **D\_mu\_std**
- **prod\_std**
- **degr\_std**
- **D\_mu\_sterr**
- **prod\_sterr**
- **degr\_sterr**
- **fitting\_parms**
- **tvec\_avg**
- **tvec\_errors**
- **squ\_fitted\_av**
- **out\_fitted\_av**
- **slice\_fitted\_av**

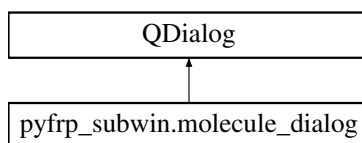
- **squ\_data\_av**
- **out\_data\_av**
- **slice\_data\_av**

The documentation for this class was generated from the following file:

- /home/alex\_loc/Documents/Research/PyFRAP/Code/molecule.py

### 3.17 pyfrp\_subwin.molecule\_dialog Class Reference

Inheritance diagram for pyfrp\_subwin.molecule\_dialog:



#### Public Member Functions

- def **\_\_init\_\_**
- def **set\_name**
- def **done\_pressed**

#### Public Attributes

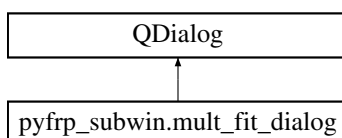
- **molecule**
- **btn\_done**
- **lbl\_name**
- **qle\_name**

The documentation for this class was generated from the following file:

- /home/alex\_loc/Documents/Research/PyFRAP/Code/pyfrp\_subwin.py

### 3.18 pyfrp\_subwin.mult\_fit\_dialog Class Reference

Inheritance diagram for pyfrp\_subwin.mult\_fit\_dialog:



#### Public Member Functions

- def **\_\_init\_\_**
- def **set\_opt\_tol**
- def **set\_maxfun**

- def **set\_x0\_D**
- def **set\_x0\_degr**
- def **set\_x0\_prod**
- def **set\_UB\_D**
- def **set\_UB\_degr**
- def **set\_UB\_prod**
- def **set\_LB\_D**
- def **set\_LB\_degr**
- def **set\_LB\_prod**
- def **set\_cut\_off\_t**
- def **sel\_meth**
- def **update\_bounds\_after\_meth**
- def **bounds\_for\_brute**
- def **check\_equ**
- def **check\_pin**
- def **check\_cut**
- def **check\_fit\_out**
- def **check\_fit\_slice**
- def **check\_fit\_squ**
- def **check\_fit\_degr**
- def **check\_fit\_prod**
- def **check\_debug\_fit**
- def **check\_save\_track**
- def **check\_bound\_LB\_D**
- def **check\_bound\_UB\_D**
- def **check\_bound\_LB\_degr**
- def **check\_bound\_UB\_degr**
- def **check\_bound\_LB\_prod**
- def **check\_bound\_UB\_prod**
- def **done\_pressed**

### Public Attributes

- **molecule**
- **temp\_LB\_D**
- **temp\_UB\_D**
- **temp\_LB\_degr**
- **temp\_UB\_degr**
- **temp\_LB\_prod**
- **temp\_UB\_prod**
- **btn\_done**
- **lbl\_opt\_parms**
- **lbl\_guess**
- **lbl\_bounds**
- **lbl\_bounded**
- **lbl\_fitting**
- **lbl\_opt\_meth**
- **lbl\_opt\_tol**
- **lbl\_maxfun**
- **lbl\_save\_track**
- **lbl\_debug\_fit**
- **lbl\_x0\_D**
- **lbl\_x0\_degr**
- **lbl\_x0\_prod**

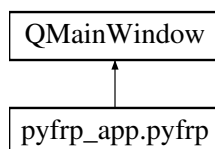
- `lbl_LB_D`
- `lbl_UB_D`
- `lbl_LB_prod`
- `lbl_UB_prod`
- `lbl_LB_degr`
- `lbl_UB_degr`
- `lbl_fit_out`
- `lbl_fit_squ`
- `lbl_fit_slice`
- `lbl_fit_prod`
- `lbl_fit_degr`
- `lbl_eq`
- `lbl_pin`
- `lbl_cut_off`
- `lbl_cut_off_t`
- `combo_meth`
- `qle_opt_tol`
- `qle_maxfun`
- `qle_x0_D`
- `qle_x0_degr`
- `qle_x0_prod`
- `qle_cut_off_t`
- `qle_LB_D`
- `qle_UB_D`
- `qle_LB_degr`
- `qle_UB_degr`
- `qle_LB_prod`
- `qle_UB_prod`
- `double_valid`
- `cb_debug_fit`
- `cb_save_track`
- `cb_bound_LB_D`
- `cb_bound_LB_degr`
- `cb_bound_LB_prod`
- `cb_bound_UB_D`
- `cb_bound_UB_degr`
- `cb_bound_UB_prod`
- `cb_fit_out`
- `cb_fit_squ`
- `cb_fit_slice`
- `cb_fit_degr`
- `cb_fit_prod`
- `cb_eq`
- `cb_pin`
- `cb_cut`

The documentation for this class was generated from the following file:

- `/home/alex_loc/Documents/Research/PyFRAP/Code/pyfrp_subwin.py`

## 3.19 pyfrp\_app.pyfrp Class Reference

Inheritance diagram for pyfrp\_app.pyfrp:



### Public Member Functions

- def `__init__`
- def `closeEvent`
- def `show_about`
- def `create_frame`
- def `init_conf`
- def `append_recent`
- def `add_recent_mbs`
- def `add_molecule`
- def `add_embryo`
- def `delete_molecule`
- def `delete_embryo`
- def `delete_specific_molecule`
- def `delete_specific_embryo`
- def `save_molecule`
- def `save_embryo`
- def `load_molecule`
- def `open_molecule`
- def `load_embryo`
- def `show_embryo_props`
- def `add_fit`
- def `copy_fit`
- def `copy_fit_for_other_embryo`
- def `copy_fit_to_all`
- def `delete_fit`
- def `edit_fit`
- def `edit_mult_fit`
- def `edit_dataset`
- def `edit_molecule`
- def `copy_embryo`
- def `copy_molecule`
- def `edit_prop`
- def `analyze_all`
- def `analyze_all_print_prog`
- def `analyze_all_finished`
- def `analyze_all_canceled`
- def `analyze_dataset`
- def `analyze_print_prog`
- def `analyze_finished`
- def `analyze_canceled`
- def `edit_geometry`
- def `edit_pde_parms`

- def **simulate\_embryo**
- def **simulation\_print\_prog**
- def **simulation\_finished**
- def **simulation\_canceled**
- def **plot\_data\_timeseries**
- def **plot\_sim\_timeseries**
- def **plot\_sim\_data\_timeseries**
- def **plot\_embryo\_slice\_imgs**
- def **plot\_embryo\_ext\_imgs**
- def **plot\_embryo\_int\_imgs**
- def **plot\_embryo\_masks\_embryo**
- def **plot\_embryo\_masks\_ext**
- def **plot\_embryo\_masks\_int**
- def **plot\_embryo\_img\_series**
- def **plot\_fit**
- def **plot\_track\_fit**
- def **create\_plot\_tab**
- def **curr\_tab\_changed**
- def **curr\_tab\_closed**
- def **adjust\_canvas**
- def **create\_slider\_plot\_tab**
- def **update\_slider\_bkgd**
- def **update\_slider\_track**
- def **perform\_fit**
- def **fitting\_finished**
- def **fitting\_canceled**
- def **perform\_fits\_molecule**
- def **fitting\_all\_finished**
- def **show\_console**
- def **hide\_console**
- def **show\_proplist**
- def **hide\_proplist**
- def **show\_plottab**
- def **hide\_plottab**
- def **print\_mem\_usage**
- def **export\_plot**
- def **export\_plot\_series**
- def **export\_movie**
- def **export\_embryo\_csv**
- def **export\_molecule\_csv**
- def **export\_fit\_to\_csv**
- def **export\_errorbar\_to\_csv**
- def **sumup\_molecule**
- def **plot\_Ds\_by\_fit**
- def **plot\_degrs\_by\_fit**
- def **plot\_prods\_by\_fit**
- def **plot\_all\_by\_fit**
- def **err\_data\_fit\_plot**

## Public Attributes

- dpi
- version
- website
- pyfrp\_dir
- molecules
- tab\_axes
- tab\_figs
- curr\_embr
- curr\_fit
- curr\_embr\_node
- curr\_mol\_node
- curr\_fit\_node
- lastopen
- menubar
- file\_mb
- file\_recent\_mb
- edit\_mb
- edit\_export\_mb
- view\_mb
- view\_console\_mb
- view\_proplist\_mb
- view\_plottab\_mb
- data\_mb
- data\_data\_mb
- data\_analysis\_mb
- data\_plotting\_mb
- sim\_mb
- sim\_plot\_mb
- fit\_mb
- fit\_fits\_mb
- fit\_fitting\_mb
- fit\_plot\_mb
- stats\_mb
- stats\_plot\_mb
- help\_mb
- embryos\_list
- prop\_list
- console
- splitter\_hor
- splitter\_ver
- embryos\_frame
- prop\_frame
- term\_frame
- plot\_tabs
- curr\_tab
- first\_tab
- curr\_conf
- recent\_actions
- curr\_node
- curr\_embryos
- parent\_node
- curr\_mol
- curr\_fits

- **fn\_backup**
- **selected\_index**
- **curr\_prop**
- **temp\_mol**
- **wait\_popup**
- **analyze\_all\_task**
- **backup\_emb**
- **analyze\_task**
- **simulation\_task**
- **img\_axes**
- **fig**
- **canvas**
- **ax**
- **vbox\_slider**
- **fitting\_task**
- **curr\_noise\_node**
- **curr\_pre\_node**
- **curr\_bkgd\_pre\_node**
- **ax2**

The documentation for this class was generated from the following file:

- `/home/alex_loc/Documents/Research/PyFRAP/Code/pyfrp_app.py`

### 3.20 `pyfrp_conf.pyfrp_conf` Class Reference

#### Public Member Functions

- `def __init__`
- `def save_conf`
- `def load_conf`

#### Public Attributes

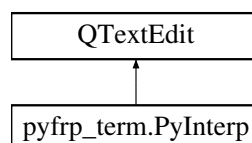
- **recent**
- **plot\_hidden**
- **term\_hidden**
- **prop\_hidden**
- **backup\_to\_file**
- **backup\_to\_mem**

The documentation for this class was generated from the following file:

- `/home/alex_loc/Documents/Research/PyFRAP/Code/pyfrp_conf.py`

### 3.21 `pyfrp_term.PyInterp` Class Reference

Inheritance diagram for `pyfrp_term.PyInterp`:





## Classes

- class [InteractiveInterpreter](#)

## Public Member Functions

- def **\_\_init\_\_**
- def **printBanner**
- def **marker**
- def **initInterpreter**
- def **updateInterpreterLocals**
- def **write**
- def **clearCurrentBlock**
- def **recallHistory**
- def **customCommands**
- def **keyPressEvent**

## Public Attributes

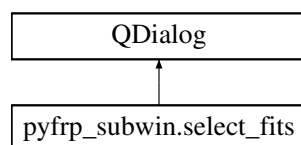
- **refreshMarker**
- **multiLine**
- **command**
- **history**
- **historyIndex**
- **interpreterLocals**
- **interpreter**
- **haveLine**

The documentation for this class was generated from the following file:

- /home/alex\_loc/Documents/Research/PyFRAP/Code/pyfrp\_term.py

## 3.22 pyfrp\_subwin.select\_fits Class Reference

Inheritance diagram for pyfrp\_subwin.select\_fits:



## Public Member Functions

- def **\_\_init\_\_**
- def **init\_left\_list**
- def **add\_fit**
- def **remove\_fit**
- def **get\_left\_selections**
- def **get\_right\_selections**
- def **get\_left\_ind**
- def **get\_right\_ind**
- def **done\_pressed**

## Public Attributes

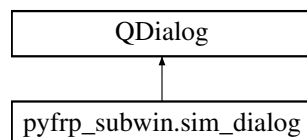
- **molecule**
- **embr\_in\_right\_list**
- **fit\_in\_right\_list**
- **single\_fit**
- **btn\_add**
- **btn\_remove**
- **btn\_done**
- **left\_list**
- **right\_list**
- **vbox**
- **hbox**
- **vbox2**
- **curr\_embr\_node**
- **curr\_embr**
- **curr\_fit**
- **curr\_fit\_node**
- **curr\_target\_embr\_node**
- **curr\_target\_fit\_node**
- **curr\_target\_fit**

The documentation for this class was generated from the following file:

- /home/alex\_loc/Documents/Research/PyFRAP/Code/pyfrp\_subwin.py

## 3.23 pyfrp\_subwin.sim\_dialog Class Reference

Inheritance diagram for pyfrp\_subwin.sim\_dialog:



## Public Member Functions

- **def \_\_init\_\_**
- **def sel\_avg**
- **def sel\_int**
- **def sel\_ic**
- **def set\_rad\_steps**
- **def set\_int\_steps**
- **def set\_volsize**
- **def set\_diff**
- **def set\_prod**
- **def set\_degr**
- **def set\_steps**
- **def check\_usemesh**
- **def check\_add\_rim\_sim**
- **def check\_small**
- **def check\_debug\_all**
- **def sel\_fn\_mesh**
- **def done\_pressed**

## Public Attributes

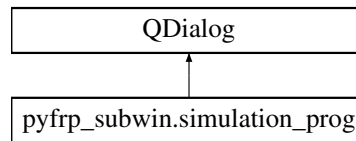
- embryo
- btn\_done
- btn\_fn\_mesh
- lbl\_parms
- lbl\_ics
- lbl\_avging
- lbl\_mesh
- lbl\_debugging
- lbl\_diff
- lbl\_prod
- lbl\_degr
- lbl\_steps
- lbl\_tstart
- lbl\_tend
- lbl\_IC\_mode
- lbl\_rad\_steps
- lbl\_avg\_meth
- lbl\_small
- lbl\_int\_meth
- lbl\_add\_rim\_sim
- lbl\_int\_steps
- lbl\_volsize
- lbl\_usemesh
- lbl\_name\_fn\_mesh
- lbl\_fn\_mesh
- lbl\_debug\_all
- lbl\_debug\_interp
- lbl\_debug\_integr
- lbl\_debug\_out
- cb\_small
- cb\_add\_rim\_sim
- cb\_usemesh
- cb\_debug\_all
- cb\_debug\_interp
- cb\_debug\_integr
- cb\_debug\_out
- qle\_diff
- qle\_prod
- qle\_degr
- qle\_steps
- qle\_tstart
- qle\_tend
- qle\_int\_steps
- qle\_rad\_steps
- qle\_volsize
- double\_valid
- combo\_ic
- combo\_avg
- combo\_int

The documentation for this class was generated from the following file:

- /home/alex\_loc/Documents/Research/PyFRAP/Code/pyfrp\_subwin.py

### 3.24 pyfrp\_subwin.simulation\_prog Class Reference

Inheritance diagram for pyfrp\_subwin.simulation\_prog:



#### Public Member Functions

- `def __init__`
- `def cancel_simulation`

#### Public Attributes

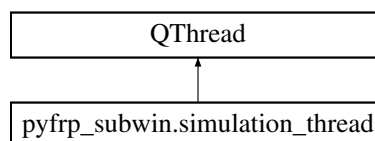
- `lbl_name`
- `btn_cancel`
- `progressbar`
- `vbox`

The documentation for this class was generated from the following file:

- `/home/alex_loc/Documents/Research/PyFRAP/Code/pyfrp_subwin.py`

### 3.25 pyfrp\_subwin.simulation\_thread Class Reference

Inheritance diagram for pyfrp\_subwin.simulation\_thread:



#### Public Member Functions

- `def __init__`
- `def __del__`
- `def run`

#### Public Attributes

- `embryo`

### Static Public Attributes

- tuple **taskFinished** = QtCore.pyqtSignal()
- tuple **prog\_signal** = QtCore.pyqtSignal(int)

The documentation for this class was generated from the following file:

- /home/alex\_loc/Documents/Research/PyFRAP/Code/pyfrp\_subwin.py