

FLIRT version 6.0

Usage: flirt [options] -in <inputvol> -ref <refvol> -out <outputvol>
flirt [options] -in <inputvol> -ref <refvol> -omat <outputmatrix>
flirt [options] -in <inputvol> -ref <refvol> -applyxfm -init <matrix> -out <outputvol>

Available options are:

-in <inputvol> (no default)
-ref <refvol> (no default)
-init <matrix-filename> (input 4x4 affine matrix)
-omat <matrix-filename> (output in 4x4 ascii format)
-out, -o <outputvol> (default is none)
-datatype {char,short,int,float,double} (force output data type)
-cost {mutualinfo,corratio,normcorr,normmi,leastsq,labeldiff,bbr} (default is **corratio**)
-searchcost {mutualinfo,corratio,normcorr,normmi,leastsq,labeldiff,bbr} (default is **corratio**)
-usesqform (initialise using appropriate sform or qform)
-displayinit (display initial matrix)
-anglerep {quaternion,euler} (default is euler)
-interp {trilinear,nearestneighbour,sinc,spline} (final interpolation: **def - trilinear**)
-sincwidth <full-width in voxels> (default is 7)
-sincwindow {rectangular,hanning,blackman}
-bins <number of histogram bins> (default is 256)
-dof <number of transform dofs> (default is 12)
-noresample (do not change input sampling)
-forcescalimg (force rescaling even for low-res images)
-minsampling <vox_dim> (set minimum voxel dimension for sampling (in mm))
-applyxfm (**applies transform (no optimisation) - requires -init**)
-applyisoxfm <scale> (as applyxfm but forces isotropic resampling)
-paddingsize <number of voxels> (for applyxfm: interpolates outside image by size)
-searchrx <min_angle> <max_angle> (angles in degrees: default is -90 90)
-searchry <min_angle> <max_angle> (angles in degrees: default is -90 90)
-searchrz <min_angle> <max_angle> (angles in degrees: default is -90 90)
-nosearch (sets all angular search ranges to 0 0)
-coarsesearch <delta_angle> (angle in degrees: default is 60)
-finesearch <delta_angle> (angle in degrees: default is 18)
-schedule <schedule-file> (replaces default schedule)
-refweight <volume> (use weights for reference volume)
-inweight <volume> (**use weights for input volume**)
-wmseg <volume> (white matter segmentation volume needed by BBR cost function)
-wmcoords <text matrix> (white matter boundary coordinates for BBR cost function)
-wmnorms <text matrix> (white matter boundary normals for BBR cost function)
-fieldmap <volume> (fieldmap image in rads/s - must be already registered to the reference image)
-fieldmapmask <volume> (mask for fieldmap image)
-pedir <index> (phase encode direction of EPI - 1/2/3=x/y/z & -1/-2/-3=-x/-y/-z)
-echosampling <value> (value of EPI echo spacing - units of seconds)

-bbrtype <value>	(type of bbr cost function: signed [default], global_abs, local_abs)
-bbrslope <value>	(value of bbr slope)
-setbackground <value>	(use specified background value for points outside FOV)
-noclamp	(do not use intensity clamping)
-noresampblur	(do not use blurring on downsampling)
-2D	(use 2D rigid body mode - ignores dof)
-verbose <num>	(0 is least and default)
-v	(same as -verbose 1)
-i	(pauses at each stage: default is off)
-version	(prints version number)
-help	

Part of FSL (build 509)
fnirt

Usage: **ATTENTION NOTATION CHELOUE AVEC DES "="**

fnirt --ref=<some template> --in=<some image>

fnirt --ref=<some template> --in=<some image> --infwhm=8,4,2 --subsamp=4,2,1 --warpres=8,8,8

Compulsory arguments (You MUST set one or more of):

--ref	name of reference image
--in	name of input image

Optional arguments (You may optionally specify one or more of):

--aff	name of file containing affine transform
--inwarp	name of file containing initial non-linear warps
--intin	name of file/files containing initial intensity mapping
--cout	name of output file with field coefficients
--iout	name of output image
--fout	name of output file with field
--jout	name of file for writing out the Jacobian of the field (for diagnostic

or VBM purposes)

--refoutname	name of file for writing out intensity modulated --ref (for diagnostic purposes)
--intoutname	name of files for writing information pertaining to intensity mapping

--logout	Name of log-file
-----------------	-------------------------

--config	Name of config file specifying command line arguments
-----------------	---

--refmask	name of file with mask in reference space
------------------	--

--inmask	name of file with mask in input image space
-----------------	--

--applyrefmask	Use specified refmask if set, default 1 (true)
-----------------------	--

--applyinmask	Use specified inmask if set, default 1 (true)
----------------------	---

--imprefm	If =1, use implicit masking based on value in --ref image. Default =1
------------------	---

--impinm	If =1, use implicit masking based on value in --in image, Default =1
-----------------	--

--imprefval Value to mask out in --ref image. Default =0.0
 --impinval Value to mask out in --in image. Default =0.0
 --minmet non-linear minimisation method [lm | scg] (Levenberg-Marquardt or Scaled Conjugate Gradient)
 --miter **Max # of non-linear iterations, default 5,5,5,5**
 --subsamp **sub-sampling scheme, default 4,2,1,1**
 --warpres **(approximate) resolution (in mm) of warp basis in x-, y- and z-direction, default 10,10,10**
 --splineorder **Order of spline, 2->Quadratic spline, 3->Cubic spline. Default=3**
 --infwhm **FWHM (in mm) of gaussian smoothing kernel for input volume, default 6,4,2,2**
 --reffwhm **FWHM (in mm) of gaussian smoothing kernel for ref volume, default 4,2,0,0**
 --regmod Model for regularisation of warp-field [membrane_energy bending_energy], default bending_energy
 --lambda Weight of regularisation, default depending on --ssqlambda and --regmod switches. See user documentation.
 --ssqlambda If set (=1), lambda is weighted by current ssq, default 1
 --jacrange Allowed range of Jacobian determinants, default 0.01,100.0
 --refderiv If =1, ref image is used to calculate derivatives. Default =0
 --intmod Model for intensity-mapping [none global_linear global_non_linear local_linear global_non_linear_with_bias local_non_linear]
 --intorder Order of polynomial for mapping intensities, default 5
 --biasres **Resolution (in mm) of bias-field modelling local intensities, default 50,50,50**
 --biaslambda Weight of regularisation for bias-field, default 10000
 --estint Estimate intensity-mapping if set, default 1 (true)
 --numprec Precision for representing Hessian, double or float. Default double
 --interp **Image interpolation model, linear or spline. Default linear**
 -v,--verbose **Print diagnostic information while running**
 -h,--help display help info