Automatic Registration

Align two images using automatic intensity-based registration

**Start Here**

**Functions**

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| --- | --- |
| [imregister](http://www.mathworks.in/help/images/ref/imregister.html) | Intensity-based image registration |
| [imregconfig](http://www.mathworks.in/help/images/ref/imregconfig.html) | Configurations for intensity-based registration |
| [imregtform](http://www.mathworks.in/help/images/ref/imregtform.html) | Estimate geometric transformation that aligns two 2-D or 3-D images |
| [imfuse](http://www.mathworks.in/help/images/ref/imfuse.html) | Composite of two images |
| [imshowpair](http://www.mathworks.in/help/images/ref/imshowpair.html) | Compare differences between images |

**Classes**

|  |  |
| --- | --- |
| [registration.metric.MattesMutualInformation](http://www.mathworks.in/help/images/ref/registration.metric.mattesmutualinformationclass.html) | Mattes mutual information metric configuration object |
| [registration.metric.MeanSquares](http://www.mathworks.in/help/images/ref/registration.metric.meansquaresclass.html) | Mean square error metric configuration object |
| [registration.optimizer.RegularStepGradientDescent](http://www.mathworks.in/help/images/ref/registration.optimizer.regularstepgradientdescentclass.html) | Regular step gradient descent optimizer configuration object |
| [registration.optimizer.OnePlusOneEvolutionary](http://www.mathworks.in/help/images/ref/registration.optimizer.oneplusoneevolutionaryclass.html) | One-plus-one evolutionary optimizer configuration object |

**Examples and How To**

* [Registering Multimodal MRI Images](http://www.mathworks.in/help/images/registering-multimodal-mri-images.html)

**Concepts**

* [Image Registration Techniques](http://www.mathworks.in/help/images/registering-an-image.html)
* [Intensity-Based Automatic Image Registration](http://www.mathworks.in/help/images/intensity-based-automatic-image-registration.html)