

Welcome to the Mouse Imaging Centre

The Mouse Imaging Centre (MICe) at The Hospital for Sick Children was created as a unique resource and comprehensive imaging facility combining the latest state-of-the-art digital medical imaging technologies for the characterization of mouse functional genomics.

MICe is staffed by an exciting team of investigators with expertise in imaging techniques, computer science, engineering, imaging processing, developmental biology and mouse pathology.

At the Mouse Imaging Centre we:

- Provide a variety of medical imaging technologies adapted to studying genetically modified mice. These technologies include magnetic resonance (MR) imaging, micro computed tomography (micro-CT), ultrasound biomicroscopy (UBM), and optical projection tomography (OPT).
- Use mouse models to investigate complex human disease.
- Perform longitudinal phenotyping of a variety of mouse models to observe normal development, disease progression and response to experimental treatment.

We also constantly work towards:

- Developing an exciting team of investigators with expertise in imaging techniques, computer science, engineering, imaging processing, developmental biology and mouse pathology.
- Collaborating with researchers around the world to pursue shared scientific interests.

If you just started working here, please visit [Getting Started at MICe](#).

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Recently Updated

[Visualization on Graham](#)

Nov 22, 2021 • updated by Ben Darwin • [view change](#)

[Pydpipe on Graham](#)

Nov 22, 2021 • updated by Ben Darwin • [view change](#)

[Preferential Spatial Gene Expression in Neuroanatomy](#)

Oct 31, 2021 • updated by Darren Fernandes • [view change](#)

[Image registration and ANTs tools](#)

Sep 10, 2021 • updated by Ben Darwin • [view change](#)

[Atlas to Atlas Registration with ANTS \(intra or inter modality\)](#)

Aug 05, 2021 • updated by Darren Fernandes • [view change](#)

[Image registration and ANTs tools](#)

Jul 20, 2021 • updated by Daniel Hoops • [view change](#)

[GO.png](#)

Jul 14, 2021 • attached by Darren Fernandes

[check_registration_quality.png](#)

Jul 14, 2021 • attached by Darren Fernandes

[enrichment_effect.png](#)

Jul 14, 2021 • attached by Darren Fernandes

[Using an Initial Model](#)

Jul 02, 2021 • updated by Darren Fernandes • [view change](#)

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Old Home Page

Content from the home page prior to our Wiki update session on November 28th, 2019.

Software developed at MICe:

Name	Description
RMINC	Analysis of data inside MINC volumes.
Pydpipe	Software to construct and run pipelines (image registration and otherwise)
Iterative Model Building (MBM.py)	Image registration, written with the Pydpipe framework.
MAGeT	Creating atlases with multiple automatically generated templates
Longitudinal registration tools	Alternate approaches to registration and analysis of longitudinal data.
minc-stuffs (formerly mice-minc-tools)	Suite of MINC tools developed at the Mouse Imaging Centre
brain-view	Visualize geometry and associated files
OPT_recon	Software to reconstruct OPT images
CT to MINC	software to create a 3D minc file from .tif files (microCT)
Software Tips and Tricks	General tips and tricks on software/computer related things

Atlases.

Atlases currently under development and available for use at the Mouse Imaging Centre can be found here: [Mouse Brain Atlases](#)

Code for running the MAGeT algorithm for atlas generation is available for download. More information can be found on the [MAGeT wiki page](#).