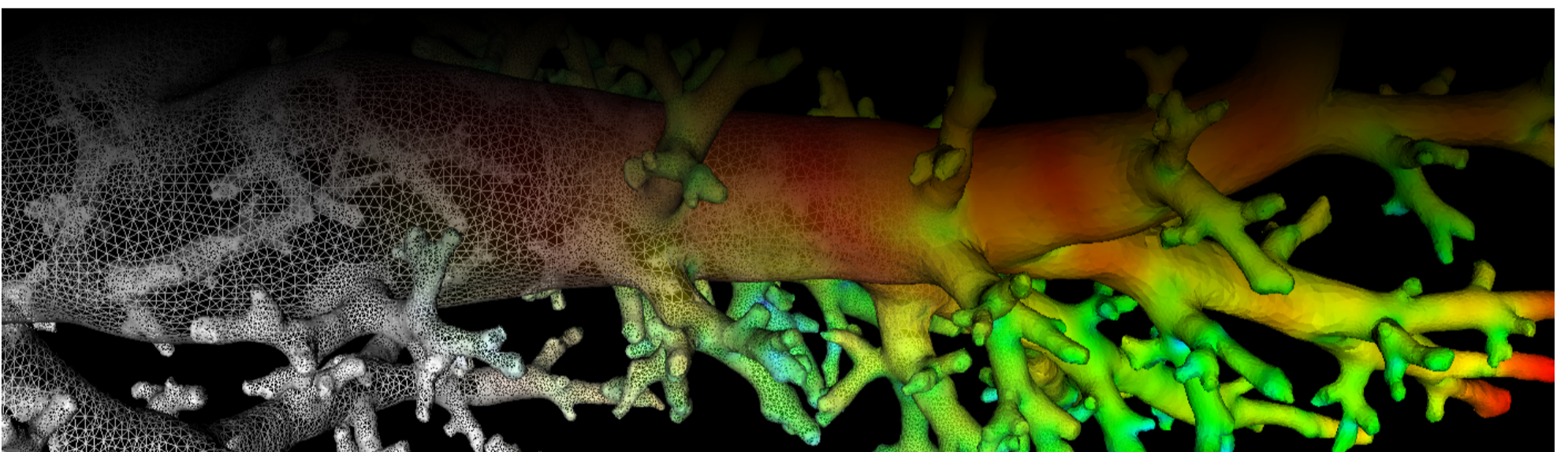# Lung Anatomy + Particle Deposition (lapd) Mouse Archive

for Modeling and Computational Toxicology

Frequently Asked Questions

[General](#) │ [Data Representation](#) │ [Data Access](#) │ [3D Slicer](#) │ [Software](#)

General

Using data from the lapd website, I produced some new paper/data/software. Can I add it to the lapdMouse archive?

We are happy to help you share and disseminate your results. Please contact us using our [contact information](#).

Data Representation

How do I obtain gravitational and branching angles for airway segments?

gravitational and branching angles for airway segments can be obtained from the data structure [*_AirwayTreeTable.csv](#). For details see our [Note on gravitational and branching angles](#).

How can I apply another airway labeling scheme to the airway tree?

Our code example [AirwayTreeTable.ipynb](#) explains how to iterate through the segments of an airway tree stored in [*_AirwayTreeTable.csv](#), identify child segments with their radii, generation number, etc. Using this information and our code example many common labeling schemes can be applied easily.

Data Access

(no questions yet)

3D Slicer

Why did you decide to use 3D Slicer for visualization of the data?

3D Slicer is a free open-source platorm for analysis and visualization of three-dimensional medical data that supports all major operating systems. Compared to other systems, it supports visualization of volumetric images, labelmaps and meshes with slice-based overlays of contours, and can be easily extended. This allowed us to both inspect our data during development, and make a piece of the software available that any user can run on their own system. See lapdMouseBrowser.

I haven't used 3D Slicer before. How do I get started?

3D Slicer comes with excellent online User Manual with a Getting Started guide for new users. We recommend going through one of the tutorials for Data loading and visualization as well.

Why is the mesh I loaded with 3D Slicer only gray?

When loading a mesh 3D Slicer does not automatically display the scalar values assigned to mesh vertices. Go to Slicer's `Models` module, select your loaded model and under section `Scalars`, enable `Visible`, select `Active Sclar` and visualization parameters suitable for your task. For more information see Slicer's Models documentation.

Why do the meshes and image volumes I loaded with 3D Slicer not align?

All lapdMouse data use an LPS coordinate system. 3D Slicer hower, loads raster images assuming an LPS coordinate system and models assuming an RAS coordinate system. If you load them manually, they will not align. One may fix this issue by manually transforming the models or images. For more information see Notes on 3D Slicer's coordinate systems.

Software

How can I download all code examples?

All software examples are hosted on github in the two repositories lapdMousePythonExamples and LapdMouseCppExamples for the Python and C++ examples, respectively. Visit the repositories website and click on `Clone or download`.

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