

Lung Anatomy + Particle Deposition (lapd) Mouse Archive for Modeling and Computational Toxicology

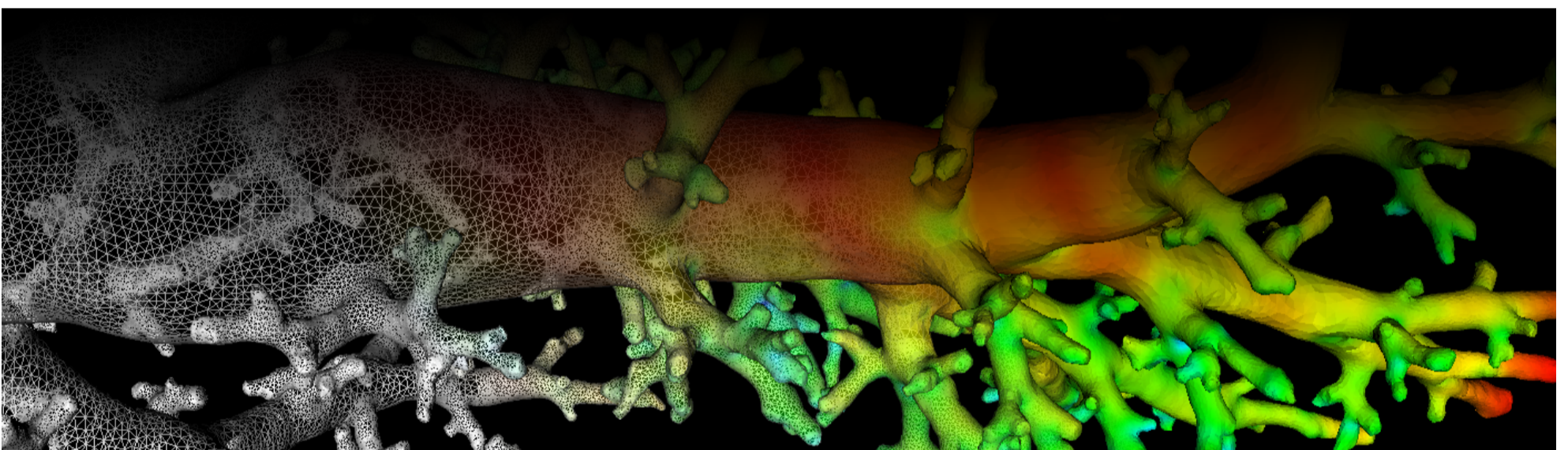


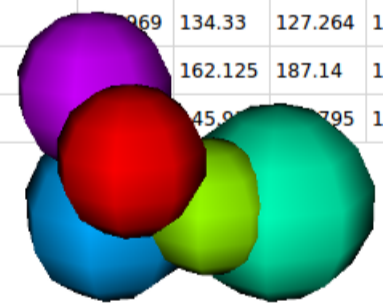
Table *_LobesDeposition.csv

Aerosol deposition measurements for lung lobes.

The measurements table contains measurements for each lung lobe. The lobe's regions are represented by labelmap [*_Lobes.nrrd](#). Related normalized aerosol deposition measurements are taken from [*_AerosolNormalized.mha](#). Each row contains the following information for a compartment:

- **label**: unique label of the compartment corresponding to region label in [*_Lobes.nrrd](#).
- **volume**: volume of compartment in (mm³)
- **mean, sigma, median, min, max**: Aerosol deposition measurements for the compartment (average, standard deviation, median, min and max value)
- **count**: number of voxels in the compartment
- **centroidX, centroidY, centroidZ**: 3d center of gravity of the compartment
- **bbox...**: axis aligned bounding box around the compartment

label	volume	mean	sigma	n
1	389.459	157.013	158.487	1
2	193.899	174.354	212.184	1
3	1069	134.33	127.264	1
4		162.125	187.14	1
5		45.9	795	1



Code Example

This example shows how to read and interpret deposition measurement tables. It explains the organization of the stored information, shows how to create simple visualizations, identify and plot information.

[CompartmentDepositionMeasurements.ipynb](#) hosted with ❤ by [GitHub](#)

[view raw](#)

Particle Deposition Measurements

Particle Deposition Measurements for different partitionings of the lungs/airways are stored in measurement tables: *_NearAciniDeposition.csv , *_SublobesDeposition.csv , *_LobesDeposition.csv and *_AirwaySegmentsDeposition.csv .

In the example below we utilize `pandas` for loading the csv files and `matplotlib` for visualization of data.

```
In [1]: import os, pandas, matplotlib, numpy
import matplotlib.pyplot as plt
```

First, we download some example data from the `lapdMouse` data archive.

```
In [2]: from lapdMouseUtils import DBUtil
db=DBUtil()
db.downloadFile('m01/m01_NearAciniDeposition.csv')
db.downloadFile('m01/m01_SublobesDeposition.csv')
db.downloadFile('m01/m01_LobesDeposition.csv')
db.downloadFile('m01/m01_AirwaySegmentsDeposition.csv')
```

NearAciniDeposition

Related Data Structures

[* Lobes.nrrd](#) | [* AerosolNormalized.mha](#)

Related Code Examples

[CompartmentDepositionMeasurements.ipynb](#) | [imageLabelStatistics.cpp](#)

Updated: 7/24/19
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