Phantom Documentation

Release 0.1.0

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Contents

Phantom is an open-source Python package for generating configurable simulation phantoms for benchmarking tomographic image reconstruction.

Danger: Package under construction!

CHAPTER 1

API

CHAPTER 2

References

CHAPTER 3

Features

- Configurable analytic 2D phantoms.
- Various visualization tools for statistics.
- Analytic projection operators.

CHAPTER 4

Contribute

- Issue Tracker: https://github.com/tomography/phantom/issues
- Documentation: https://github.com/tomography/phantom/tree/master/doc
- Source Code: https://github.com/tomography/phantom
- Tests: https://github.com/tomography/phantom/tree/master/test

CHAPTER 5

License

The project is licensed under the BSD-3 license.

CHAPTER 6

Indices and tables

- genindex
- modindex
- search

[1] Xia C, Zhu K, Cao Y, Sun H, Kou B, and Wang Y. X-ray tomography study of the random packing structure of ellipsoids. *Soft Matter*, 10(7):990–996, 2014.

[2] Al-Raoush R and Willson CS. Extraction of physically realistic pore network properties from three-dimensional synchrotron x-ray microtomography images of unconsolidated porous media systems. *Journal of Hydrology*, 300(1):44–64, 2005.

[3] Al-Raoush R, Thompson K, and Willson CS. Comparison of network generation techniques for unconsolidated porous media. *Soil Science Society of America Journal*, 67(6):1687–1700, 2003.

[4] A Sufian, AR Russell, AJ Whittle, and M Saadatfar. Pore shapes, volume distribution and orientations in monodisperse granular assemblies. *Granular Matter*, 17(6):727–742, 2015.