

1.0.22

- included additional smoothing options of reference value profiles for gray value calibration menu
- smoothing is now also applied in case that the wall is chosen as a reference
- removed nonsensical entries from gray value calibration menu
- fixed bug that led to infinite porosities

1.1.0

- Uncoupled SoilJ from BoneJ. Using native ImageJ/Fiji plugins as well as Thomas Boudier's 3D ImageJ Suite and MorphoLibJ:

J. Ollion, J. Cochennec, F. Loll, C. Escudé, T. Boudier. (2013) TANGO: A Generic Tool for High-throughput 3D Image Analysis for Studying Nuclear Organization. *Bioinformatics* 29(14):1840-1.

Legland, D.; Arganda-Carreras, I. & Andrey, P. (2016), "MorphoLibJ: integrated library and plugins for mathematical morphology with ImageJ", *Bioinformatics* (Oxford Univ Press) **32(22)**: 3532-3534, PMID 27412086, doi:10.1093/bioinformatics/btw413.

- added image morphology characterisation: Crofton equation derived surface (13 directions), improved Euler number for pore space that does exclude 'levitating' particles (26NN).
- replaced the BoneJ auto-anisotropy algorithm with a native SoilJ one

1.1.4

- build in BoneJ again for the fast parallel Particle Analyzer
- added a ClosingMask Routine for creating Aggregate masks

1.1.5

- added a plugin for cutting images relative to InnerCircle coordinates

1.1.6

- added Linux compatibility (Yehaa!)

1.1.7

- fixed bugs in the anisotropy routine

1.1.8

- fixed a whole cascade of bugs associated with the use of surface topographies
- included the "fillHoles" option for InnerCircle analyses

1.1.9

- Included a more sophisticated way to extract histograms

1.1.10

- fixed yet another bug associated with using surface topographies.
- critical pore diameter is now saved correctly
- visualization of the image segmentation was fixed
- when the ColumnFinder is not supposed to find top and bottom, it now really does not

1.1.11

- implemented a 2D histogram extraction method, i.e. of original image and its gradient

1.1.12

- re-implemented the parallel particle analyzer into the surface detection
- implemented ternary segmentation based on 2D histograms
- implemented plugin to cut out ROIs using a 3-D binary mask image
- fixed a bug occurring when InnerCircle files were used for clipping away image canvas
- fixed a bug the lead to occasional crashes of the canvas clipping plugin

1.1.13

- the joint 2D histograms can now also be directly derived from a collection of individual 2D histograms

1.1.15

- added multi region segmentations for Otsu, maxEntropy and MinError
- added option to analyze morphologies of image phases with voxel values other than 255
- added option to calculate and plot the phase volume with connection to the top of image or soil surface

1.1.16

- SoilJ now also runs on a Mac
- SoilJ can now also handle 8-bit images

1.1.17

- the column walls can now also be found on basis of a gray-value (useful for images calibrated to Hounsfield units)
- the ColumnWallFinder can now also straighten and center the column
- the ColumnWallFinder can now also be used for images with cross-sections parallel to Z-axis.

1.1.18

- started re-implementing steel column recognition and artefact correction (not finished yet)

- included [Ignacio Arganda-Carreras](#) implementation of the Lee et al. 1994 skeletonization approach, in combination with Diego Soto's method for preserving the backbone.
- included [Ignacio Arganda-Carreras](#) skeleton analyzes plugin.

1.2.0

- included a more intuitive file opening system. Instead of selecting folders, one has to select a TIFF file now.