First release is out

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niko
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Dear colleagues,

We would like to announce our beta release of cisTEM (http://cistem.org), a new open-source software package that implements a full image processing workflow for single-particle electron microscopy. It features optimized versions of Unblur, CTFFIND4 and Frealign, as well as a number of new programs for particle picking, 2D classification, ab-initio 3D reconstruction, 3D auto-refinement and map sharpening. These programs are incorporated into an intuitive GUI that guides the user from importing of datasets all the way to finalizing 3D maps.

We encourage new users to complete the tutorial, which should take around two hours depending on the workstation used. It showcases all major processing steps using an apoferritin dataset, guiding the user all the way from movies to a 3-Å resolution reconstruction.

cisTEM has been optimized to run on CPUs; GPUs are currently not supported. Pre-compiled binary executables for Linux systems, as well as the source code, can be downloaded from cistem.org. We recommend using the pre-compiled version whenever possible as these benefit from optimized libraries, and are typically ~5 times faster than versions compiled by users. The web page includes documentation, as well as a forum where registered users can post questions and issues.

We hope that cisTEM will be useful to people interested in single-particle cryo-EM and encourage user feedback on our forum to help us improve future releases.

Happy processing!

Tim, Alexis & Niko