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Mastodon – a large-scale track-editing framework for light sheet data

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Light sheet microscopy allows live 3D imaging of entire developing embryos with high spatial and temporal resolution. Computational analysis of these recordings promises new insights in developmental biology. However, a single dataset often comprises many terabytes, which makes storage, processing, and visualization of the data a challenging problem. The open-source Fiji platform provides tools to address this challenge. In this talk, I will present Mastodon, a track-editing framework for cell tracking and lineage tracing in Fiji.

Large-scale automated tracking in biological datasets is a very active field of research. To support machine learning methods, editing tools are needed to facilitate curation, proof-reading, and the manual generation of ground truth data. To make such tools accessible to biologist researchers, they should be easy to obtain, learn, and use. Additionally they must be intuitively usable and remain responsive in the face of millions of tracked objects and terabytes of image data. To make them useful for researchers in automated tracking, they need to be open source, adaptable, and extensible. Mastodon is our effort to provide such a tool in Fiji.

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Terms and Conditions

Yes

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