Contribution ID : **46**   Type : **Short Talk**

Towards next generation imaging pipelines using the Adaptive Particle Representation.

Monday, 13 August 2018 17:45 (15)

The Adaptive Particle Representation (APR) is an alternative image representation to pixel images for realizing the next generation of imaging pipelines using light-sheet fluorescence microscopy. The APR addresses computational, memory, and storage bottlenecks by adapting the image resolution to the local image content. Unlike standard image compression, the adaptive computational and memory benefits of the APR can be used for all processing and visualization tasks, without returning to the original full pixel image. Here we will present recent developments and extensions for the APR including GPU pipeline and processing acceleration, adaptation through time, and block-wise APR transforms for large images. Also, we will discuss current software support including, Python and Java wrappers for the C++ LibAPR library, and integration with Fiji and BigDataViewer.

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Terms and Conditions

Yes

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Session Classification : Image analysis of light sheet data

Track Classification : Light sheet fluorescence microscopy