Bioimaging Across Scales with Light-Sheet Microscope

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Biological processes span several temporal and spatial scales. Quantification of these processes not only requires novel imaging techniques, but also underlines the need for a tighter integration of microscopy concepts with data handling methods and computational techniques for image processing and analysis. I will present a multiview selective-plane illumination microscope (MuVi-SPIM) that allows rapid *in toto* fluorescence imaging of biological specimens with subcellular resolution. I will demonstrate its potential through *in toto* imaging of the embryonic development of *the fruitfly*. The unprecedented speed of the