3D Wake Structure of a Flapping Wing

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3D flow structure behind a flapping wing captured by volumetric particle image velocimetry (3D-PIV). The wing generates a strong downward jet at the end of the downstroke associated with a vortex ring. This is illustrated by the streamlines colored by the magnitude of the velocity. The translucent gray surfaces show isosurface of the vorticity. For the experiments: Re$_o$ = 7500 and St = 0.35.