**Caption List - Movies**

**Movie 1**: The $Q=0.02$ iso-surfaces are coloured by $\left|U\right|/|U|\_{max}$ to illustrate the 3D vortex shedding topology of a pendulum with $m^{\*}=3.26$ and a timescale of $1/16$.

**Movie 2:**Video showing a zoomed extent of movie 1 to highlight the vortex separation during the downward swing of a pendulum with $m^{\*}=3.26$ and a timescale of $1/25$. The $Q=0.05$ iso-surfaces are coloured by $\left|U\right|/|U|\_{max}$.