



**Movie 1.** Sunfish with no anal/dorsal fins. The 3D wake structure visualized using iso-surfaces of q-criteria for the sunfish with no anal/dorsal fins ( $Re=4000$  simulation).



**Movie 2.** Sunfish with erected anal/dorsal fins. The 3D wake structure visualized using iso-surfaces of q-criteria for the sunfish with erected anal/dorsal fins ( $Re=4000$  simulation).



**Movie 3.** Sunfish with no tail. The 3D wake structure visualized using iso-surfaces of q-criteria for the sunfish with no tail ( $Re=4000$  simulation).