

Fig S1: examples of pose normalizing and mouth detection of larval fish

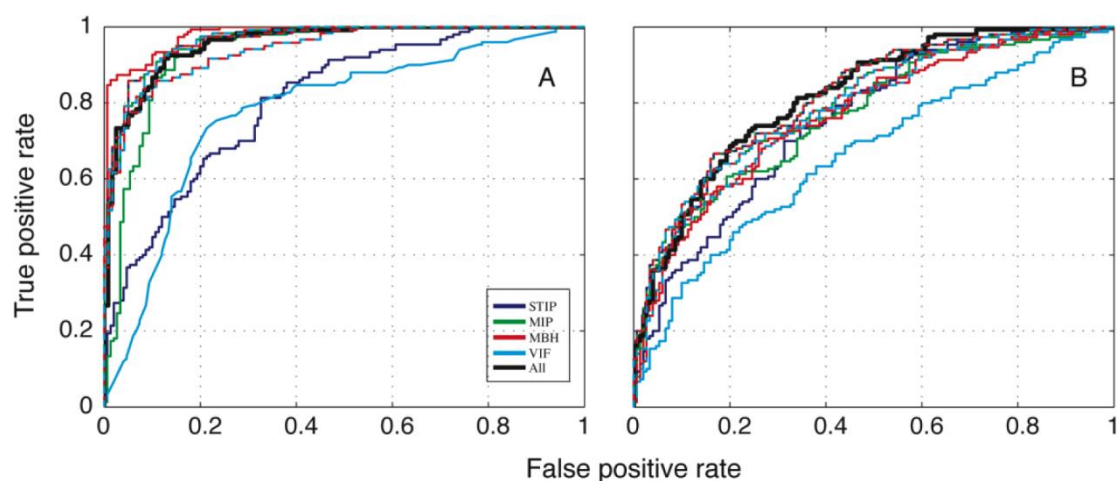
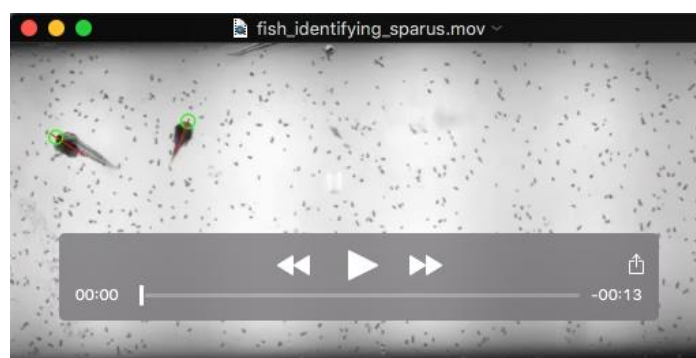


Fig S2: area under the curve (AUC) for *A. nigrofasciata* and *H. bimaculatus* (A) and *S. aurata* (B), for the different descriptors used in this study. Descriptor combinations (e.g. MBH+VIF) are marked by dashed, two color lines. The combination of all descriptors (STIP +MIP+MBH+VIF), which had the best performance is marked by a black thick line.



Movie 1. Video processing (first two stages of Fig. 2 in the main text) automatically identified fish and determined mouth location, indicated by green circles.