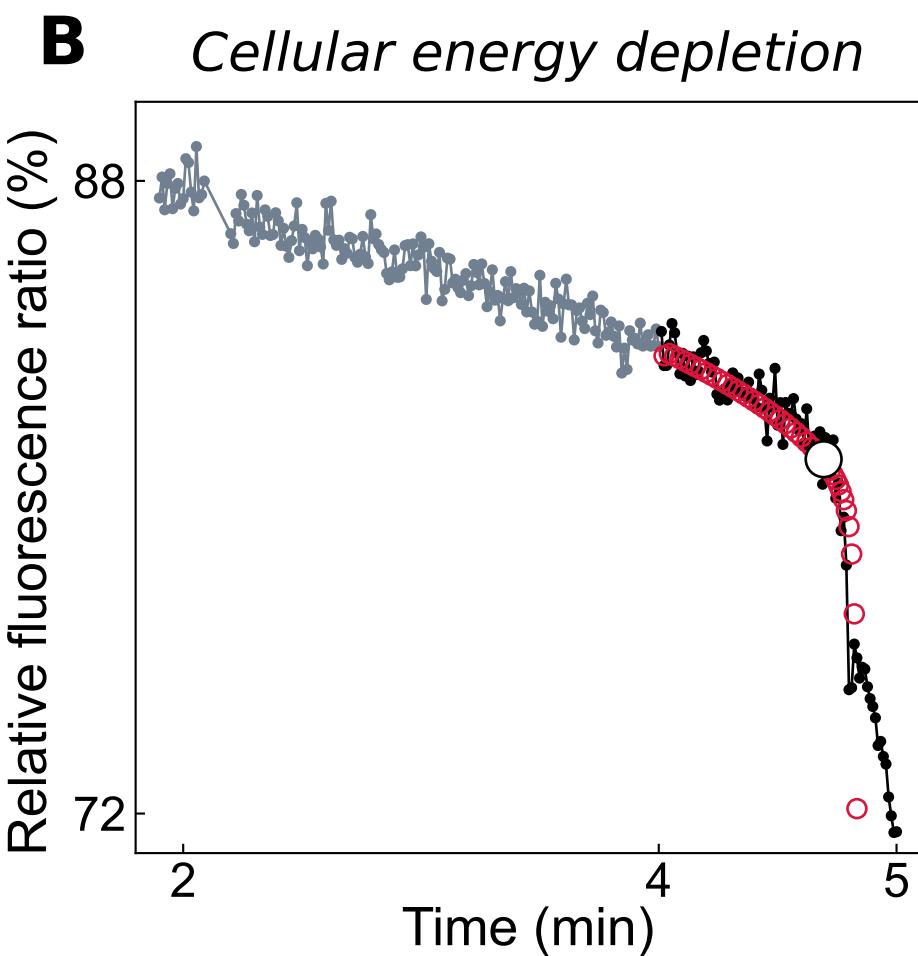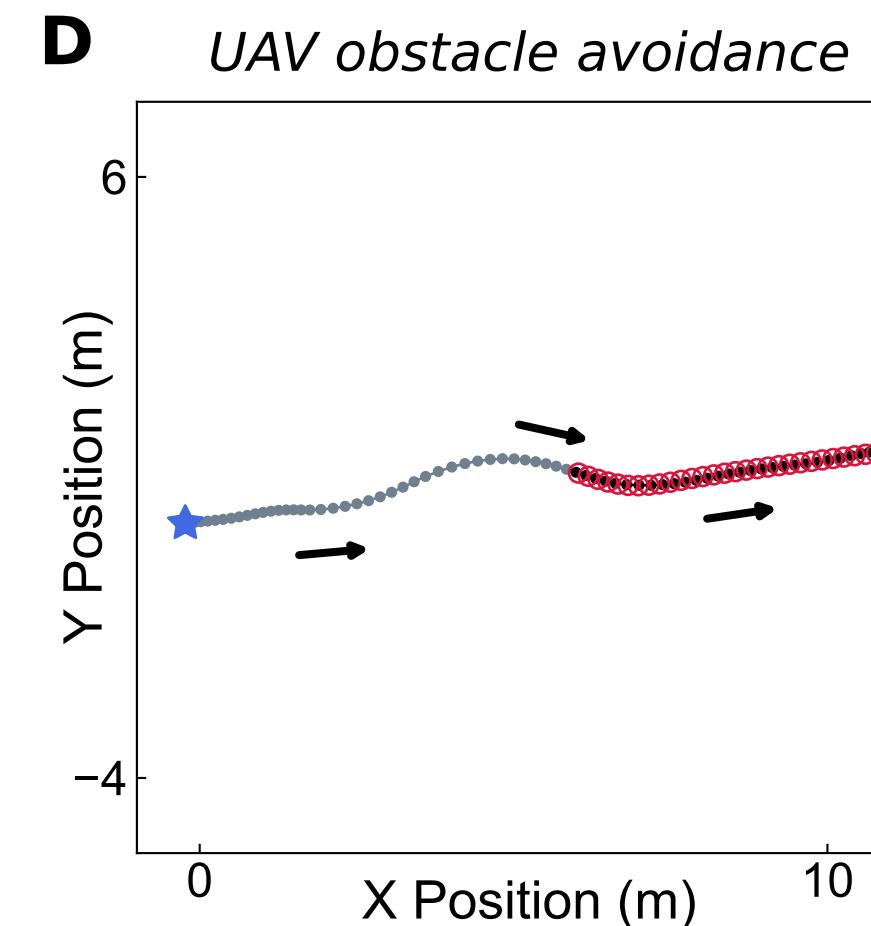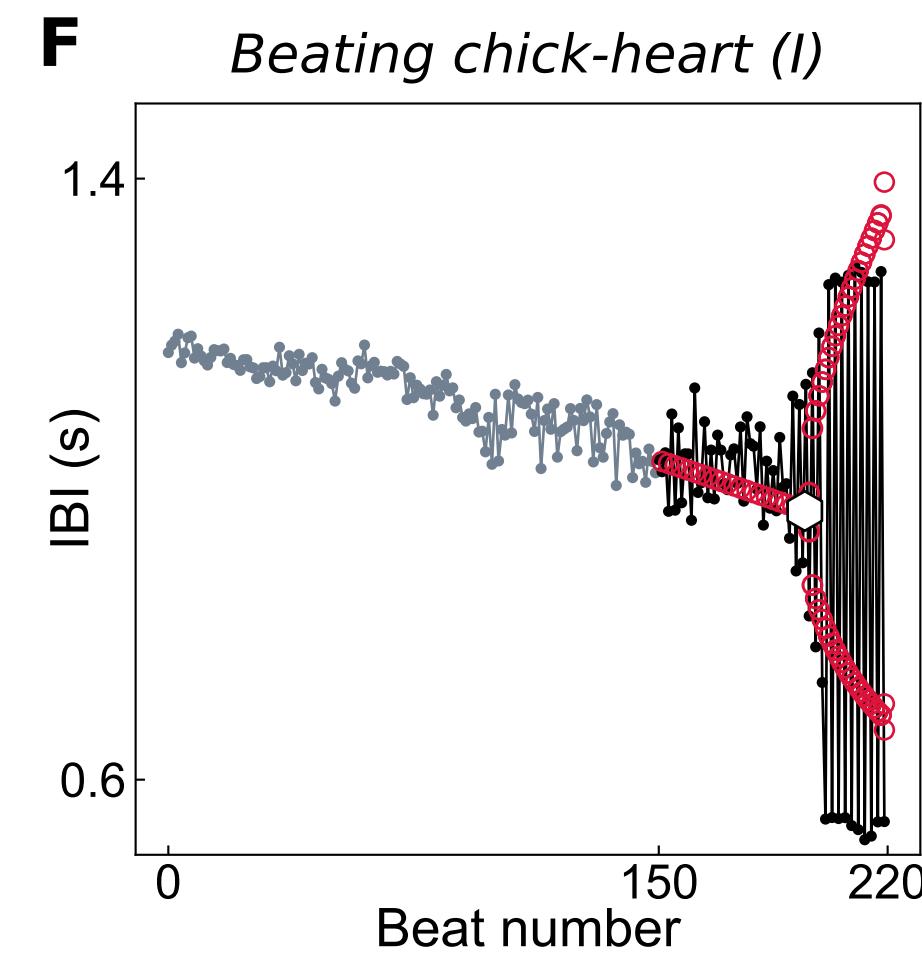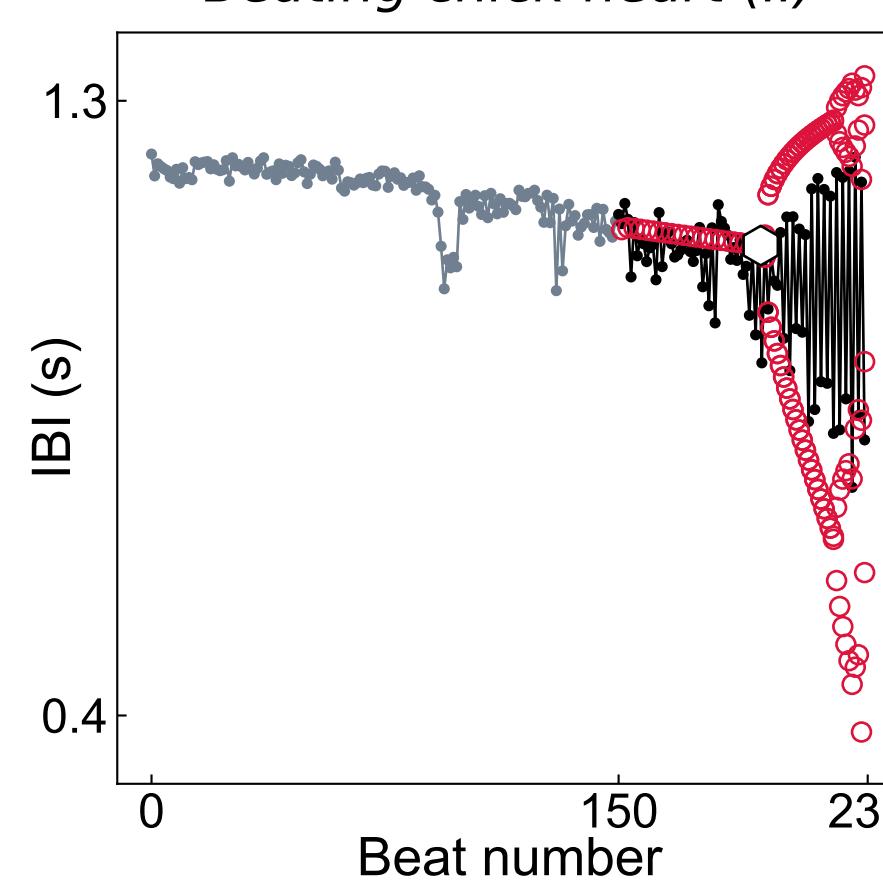**Legend:**
- System state
  - (B) ATP concentration
  - (D) Odometry path
  - (F-H) Inter-beat intervals
- Training data
- ○ Prediction
- ○ Predicted fold bifurcation
- ⬡ Predicted period-doubling bifurcation
- ★ Initial UAV position

A — *Experiment illustration*

B — *Cellular energy depletion*
- Relative fluorescence ratio (%)
- Time (min)

C — *Experiment illustration*

D — *UAV obstacle avoidance*
- Y Position (m)
- X Position (m)

E — *Experiment illustration*

F — *Beating chick-heart (I)*
- IBI (s)
- Beat number

G — *Beating chick-heart (II)*
- IBI (s)
- Beat number

H — *Beating chick-heart (III)*
- IBI (s)
- Beat number