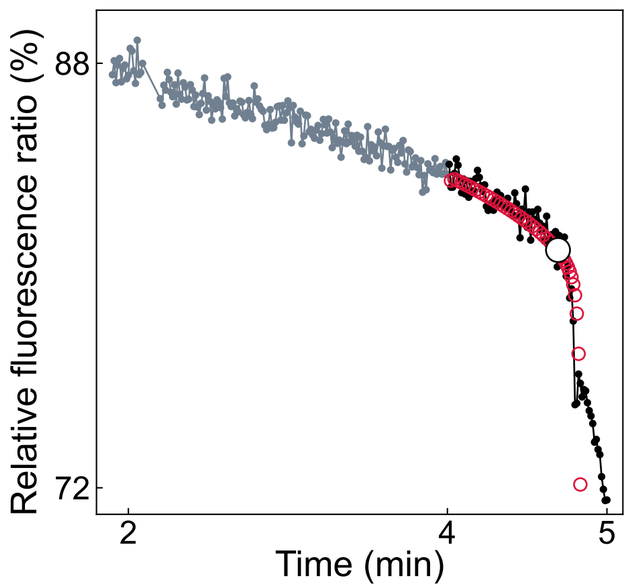
System state
Prediction
Training data
Predicted fold bifurcation
Calculated UAV horizontal thrust
Predicted period-doubling bifurcation

a

Experiment illustration

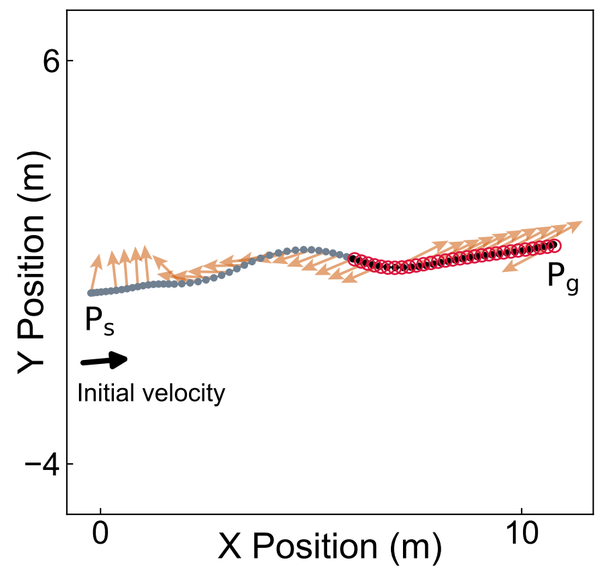
b *Cellular energy depletion*



c

Experiment illustration

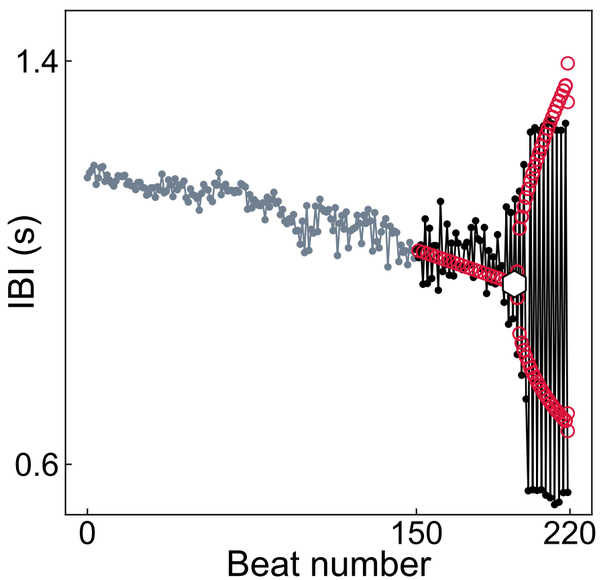
d *UAV autonomous flight*



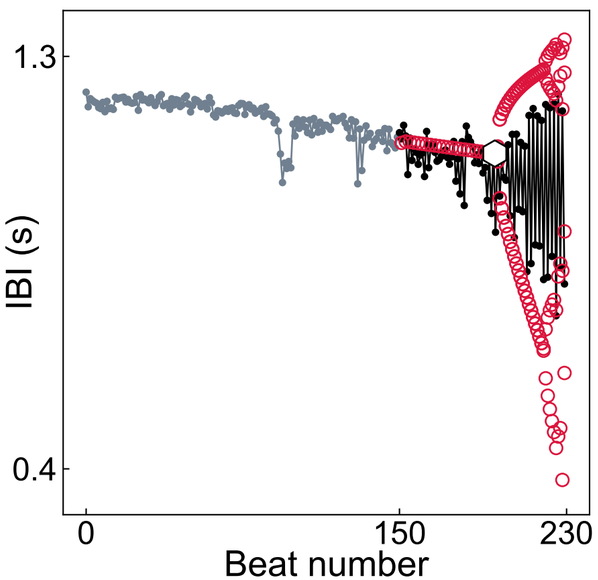
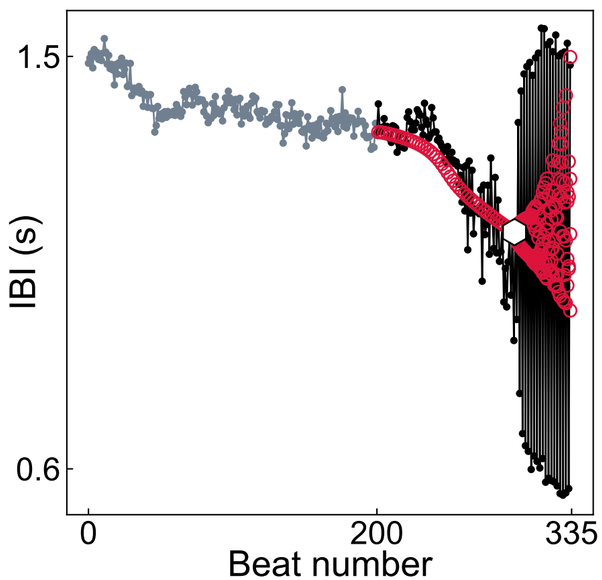
e

Experiment illustration

f *Beating chick-heart (I)*



g *Beating chick-heart (II)*



h *Beating chick-heart (III)*