A) Obtain data: high speed video of prey-capturing strikes

B) Extract model inputs: kinematics of performance-determining traits

C) Assign prey state and escape response; define performance

- **Evasive prey**: Prey escapes when predator approaches. Strike successful if prey crossed the mouth line.
- **Zooplankton prey**: Prey escapes when strain levels exceed a threshold.
- **Attached prey**: Prey stagnant, clings to the substrate. Strike successful if force on prey exceeded a threshold.

D) Run model

- **Flow speed** (magnitude, timing)
- **Strike kinematics** (gape, protrusion, ram, timing, distance)
- **Flow field** (spatio-temporal gradient in pressure, velocity and acceleration)
- **Prey traits** (size, shape, escape tactics)
  - Hydrodynamic force on prey
  - Prey displacement