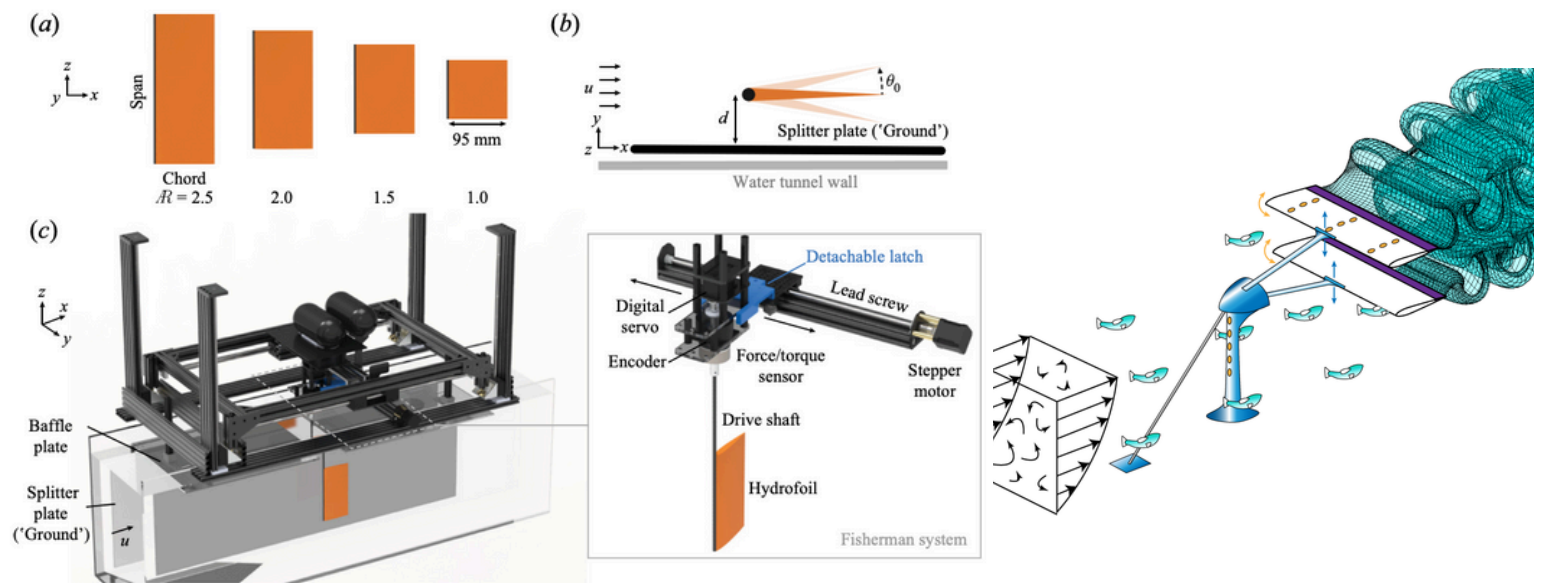


BIO-INSPIRED RIVERINE POWER GENERATION



What?

- Contribute to the design of a **\$7.5M U.S. DoD, DoE funded project** to develop a hydrokinetic turbine, which uses bio-inspired hydrofoils oscillating in water flow to **convert motion into electricity**, suitable for remote villages and large cities.

How?

- Used **SolidWorks** to upgrade the design.
- Wired and troubleshooted** motors, angular encoders, torque sensors, laser distance sensors, etc.
- Utilized a DAQ card, LabVIEW, and MATLAB for **data acquisition and processing**.
- Used optical encoders to **track exact positioning**.

Results

- Boosted power generation output by 57%** by designing and implementing a **wireless communication system** for the closed-loop control and data acquisition that utilizes **real-time data analysis** to optimize energy extraction efficiency.

