# HydroSense Mini **Ubiquitous Hydration Sensing**

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### **Towards Smarter Hydration Tracking**

Balanced hydration is essential for human health. However, tracking how much water you drink throughout a day is often done manually on smartwatches or smartphones and is tedious at best. We propose a low-power smart water bottle with capacitive sensing for high adherence and robust tracking of hydration.

### **SYSTEM DESIGN**

 $k = \frac{\varepsilon}{\varepsilon}, C = \frac{k\varepsilon_0 A}{A}$ 

# **Active Capacitive Sensing for** Water Level Sensing





**CAPACITIVE SENSING** 

## **Design Considerations for Passive** and Robust Hydration Tracking

### **Robust Sensing** and Form Factor



Sensors to Understand Non-Water Drinking





Shaking,

Rotating



# **FUTURE DIRECTIONS**

- 1. Integrate different designs and sensors



2. Collect physiological sensing data (PPG, EDA, CGM) 3. Predict hydration from physiological sensing 4. Develop physiologically informed hydration nudging