







# Swimming Pool and Flow tank

The facility is a medium size pool for testing performance of small swimming robots. The room is equipped with a tracking system based on the cameras mounted above the swimming pool. Tracking system provides position information of all bright points in the swimming pool area. Swimming tests against water flow can also be done by mounting removable components of the flow tank system, shown in the left photo.

#### **Key Features**

- Removable flow tank components for fast switching between infinity swimming and free swimming
- Quick and fast integration of tracking system client code
- Good position accuracy of multiple points in 2D (

#### Possible Applications

- Testing and position tracking of swimming robots while swimming freely in the pool
- Swimming (and position tracking) against the constant flow of water, i.e. infinity swimming when speed and direction of flow is matched with the ones of the swimming robot



### Access information

| Corresponding infrastructure | École Polytechnique Fédérale de Lausanne<br>BioRobotics Lab |
|------------------------------|---|
| Location                     | Route Cantonale,<br>1015 Lausanne, Switzerland              |
| Unit of access               | Working day   |

## Technical specifications

| Position accuracy        |                                    |
|--------------------------|------------------------------------|
| Max water flow speed     | 50cm/s                             |
| Flow tank dimensions     | 400cmx100cmx37cm (LxWxD)           |
| Free swimming dimensions | 600cmx200cmx37cm (LxWxD)           |
| Position data protocol   | Client server data with timestamps |
|                          |                                    |

### Additional information

You may contact <a href="mailto:olexandr.gudozhnik@epfl.ch">olexandr.gudozhnik@epfl.ch</a> or alessandro.crespi@epfl.ch for further information.