



Blue Fins Team

Shanghai Jiao Tong University | Shanghai, CHINA



Company Info.:

- **Team ID:** New Team
- **Company & School Name:** *Blue Fins*,
Shanghai Jiao Tong University
- **Location:** Shanghai, CHINA



***New Team!* in Pioneer Class**

Distance Travelled: 11260 KM (6998mi)



Mechanical Group

Leader: Jiahao Lin (R2-7, 27', CTO)*
Peijian Yu (R2-2, 28', ROV & Manipulator)
Xinyi Li (R1-1, 29', ROV)
Zijun Meng (R2-9, 27', ROV)



Software Group

Leader: Yanqi Feng (R1-3, 26', Co-CEO & COO)
Jiaming Guo (R1-5, 26', CO-CEO & CFO)
Weizhao Huang (R2-4, 27', Computer Vision)
Peiqin Wu (R2-10, 29', Computer Vision)
Weiheng Lin (NP, 28', Firmware)
Sining Qiao (R1-7, 28', Firmware)
Yulin Zhong (NP, 27', Firmware)



Business Group

Leader: Kunhao Zhang (R2-6, 26')
Ying Yu (R1-2, 26')
Jiaru Zhen (NP, 28')
Ling Yao (R1-6, 27')
Longteng Fan (NP, 26')



Float Group

Leader: Yitao Xue (R2-1, 27')
Jingyuan Qin (NP, 28')
Haiyang Cheng (R2-3, 28')



Mentor: Prof. Jianping He (R1-4) & Ding Lin (NP)
Coach: Pangkit Fong (NP)



* Note: **RX-X** = row-X (front to back) and position-XX (left to right), **NP** means **Not Pictured**
2X' = expected graduation year, **final entry** = team role,
e.g. **(RX-X,27,CTO)** means position X in Row X, 2027 graduation, and CTO role.

FinsROV

Size : $\Phi 115\text{ mm} \times 498\text{mm}$ (Float only)

590 mm $\times$ 468 mm $\times$ 290 mm (ROV only*)

**Height up to 600mm if Manipulator included*

Weight : 4.3956 KG (Float only)

21.3774 KG (ROV with Manipulator)

Working Hours : 2788 Hours

Total Cost : \$ 4905.99



Special Features:

- High-precision, High-frequency speed control for drive motors
- Multi-DOF force-controlled robotic arm
- CAN bus / Interference-resistant / High bandwidth / Simplified wiring: can be daisy-chained using a single cable
- FineMote : synthesizes real-time embedded middleware with automatic firmware generation, deterministic data exchange, and formal schedulability guarantees
- Power-line carrier (PLC) communication integrated into the tether, combining power and stable long-distance data transmission in a single cable

Safety Features:

- Propeller guards prevent contact with rotating parts and reduce entanglement
- IP68 underwater connectors and O-ring sealed acrylic housing ensure electrical insulation and hull integrity
- In-cab fuse overcurrent protection
- Centralized emergency power cutoff / main power switch
- Strain relief sleeves on all cables to prevent pulling damage