Abstract

Submerged robots are broadly acclimated in the acreage of amphibian development. The necessity for higher value and propulsive routine basically requires fish-like performance. Fish swim in an unusual motion such as ostraciiform. The Ostraciiform pond approach utilizes the caudal fin aerial to accomplish piscine propulsion with axis maneuverability. Various absolute automatic angle models based on oscillatory motion has been studied. Such as the sensors, actuators, accouterments and software used. Structures and abstracts acclimated in absolute angle robots and acceptation of alternative is reviewed. It helps in allotment of appropriate set of ambit to structural design of prototype fish for analysis purposes.

References

2. C. C. Lindsey.1978. Form, function and locomotory habits in fish in Fish Physiology
A Survey on Various Robotic Fish Models based on Oscillatory Motion


3. C.M. Breder. 1926. The locomotion of fishes Zoologica, vol. 4, pp. 159–256


7. JD Geder, R Ramamurti, M Pruessner, J Palmisano - Oceans-San Diego. Maneuvering performance of a four-fin bio-inspired UUV.

8. JS Palmisano, R Ramamurti, J. Geder, M Pruessner. 2007. How to maximize pectoral fin efficiency by control of flapping frequency and amplitude. WC Sandberg, 18th International Symposium on Unmanned Untethered Submersible Technology.


13. Shu-Yan Wang, Zhujun, Xin-guo Wang, Qinfeng Li. 2015. A Bionic Fish Propulsive Mechanism with Caudal Fin Oscillating in Variable Direction Based on Linear Hypocycloid. The 14th IFToMM World Congress, Taipei, Taiwan. DOI: 10.6567/IFToMM.14TH.WC.0S1.005.


Index Terms

Computer Science

Information Sciences
Keywords

Caudal fin, Computation Fluid Dynamics, AUV, Central pattern generator, Angle of Attack theory.