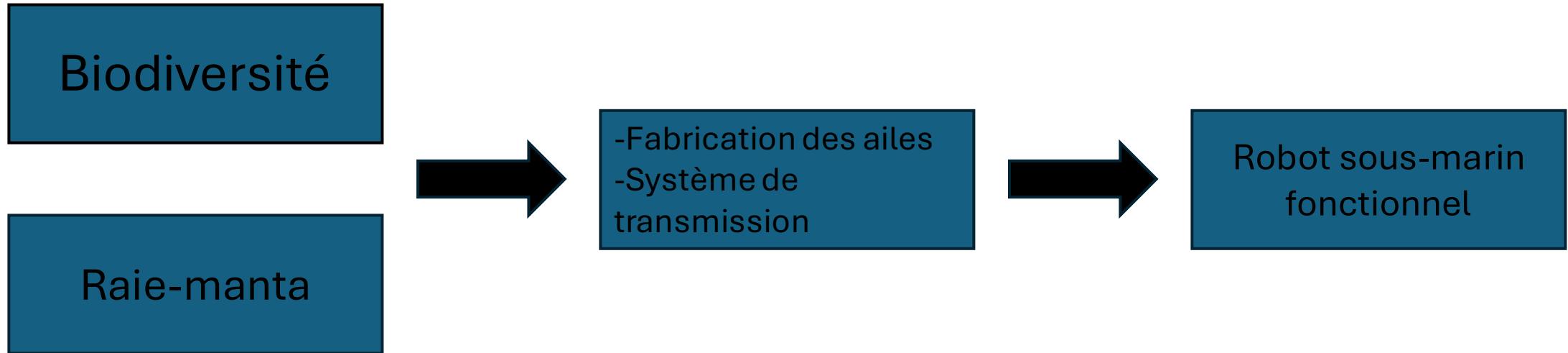


Projet personnel de recherche :

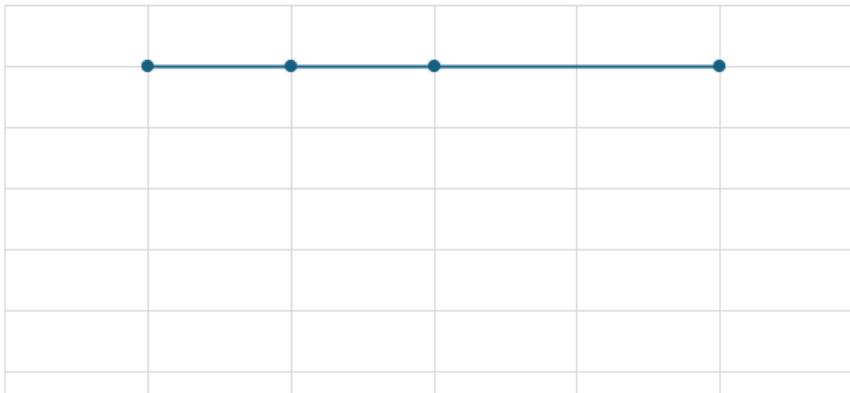
Fabrication d'un robot sous-marin bio-inspiré type raie manta

Passer de la nature à la robotique

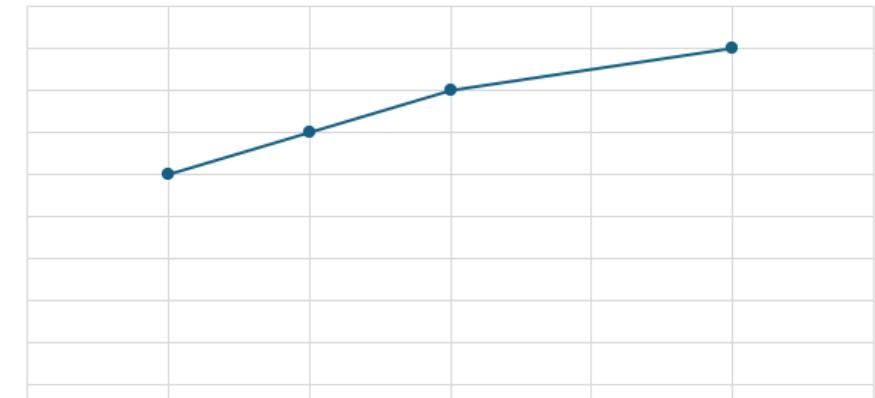


Conception/Construction de l'aile

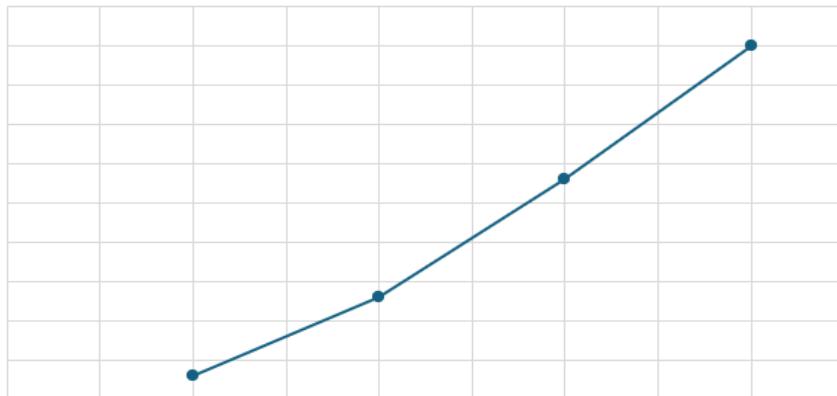
Déformation nageoire trop rigide



Déformation nageoire avec une bonne flexibilité

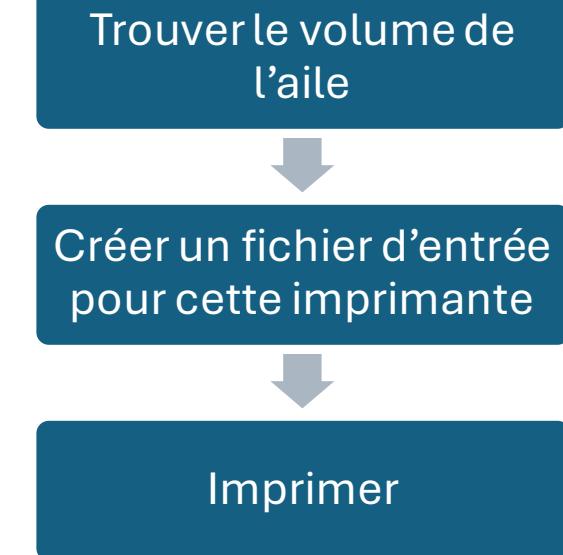


Déformation nageoire trop souple



Fait par le professeur Chew Chee Meng à l'université nationale de Singapour

Imprimante 3D Résine



Avantages

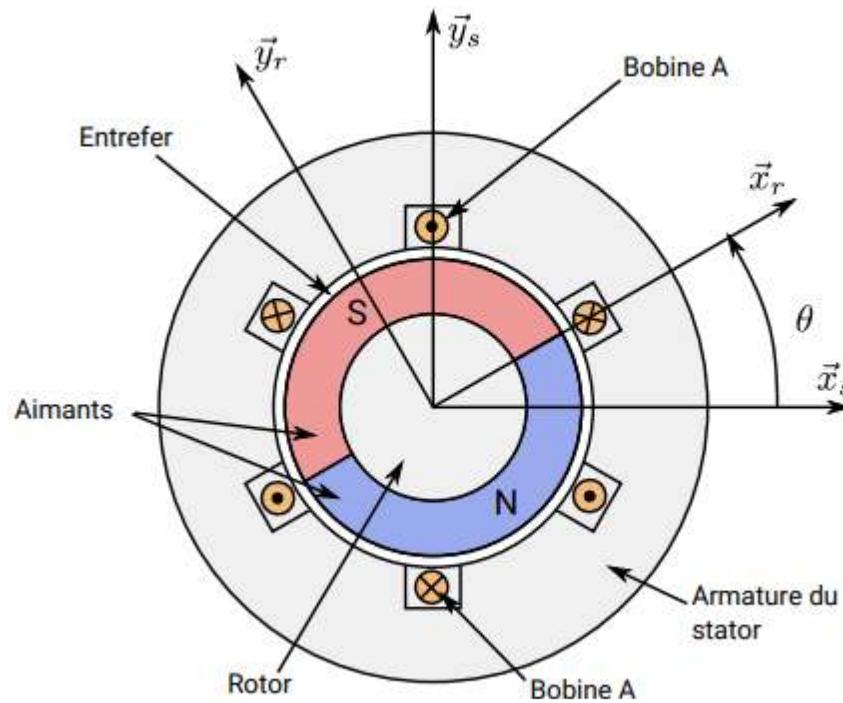
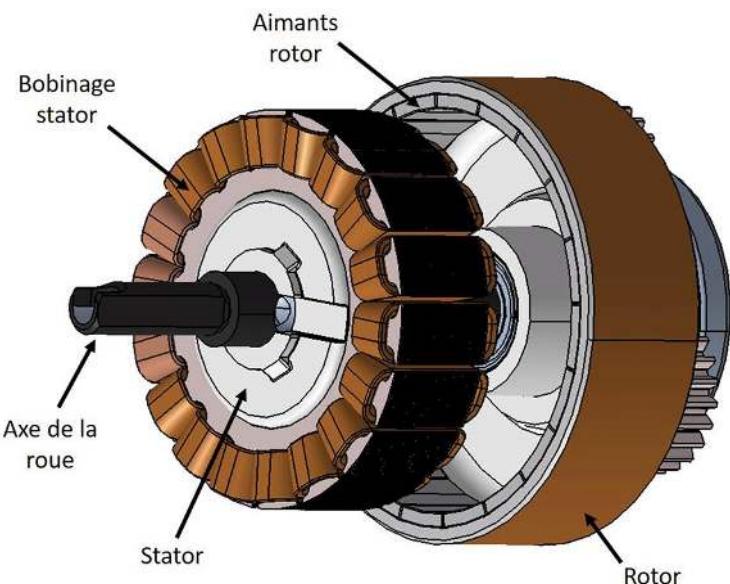
- Flexibilité contrôlée
- Résistance aux chocs
- Adhérence et conformabilité
- Facilité de fabrication
- Précision dimensionnelle



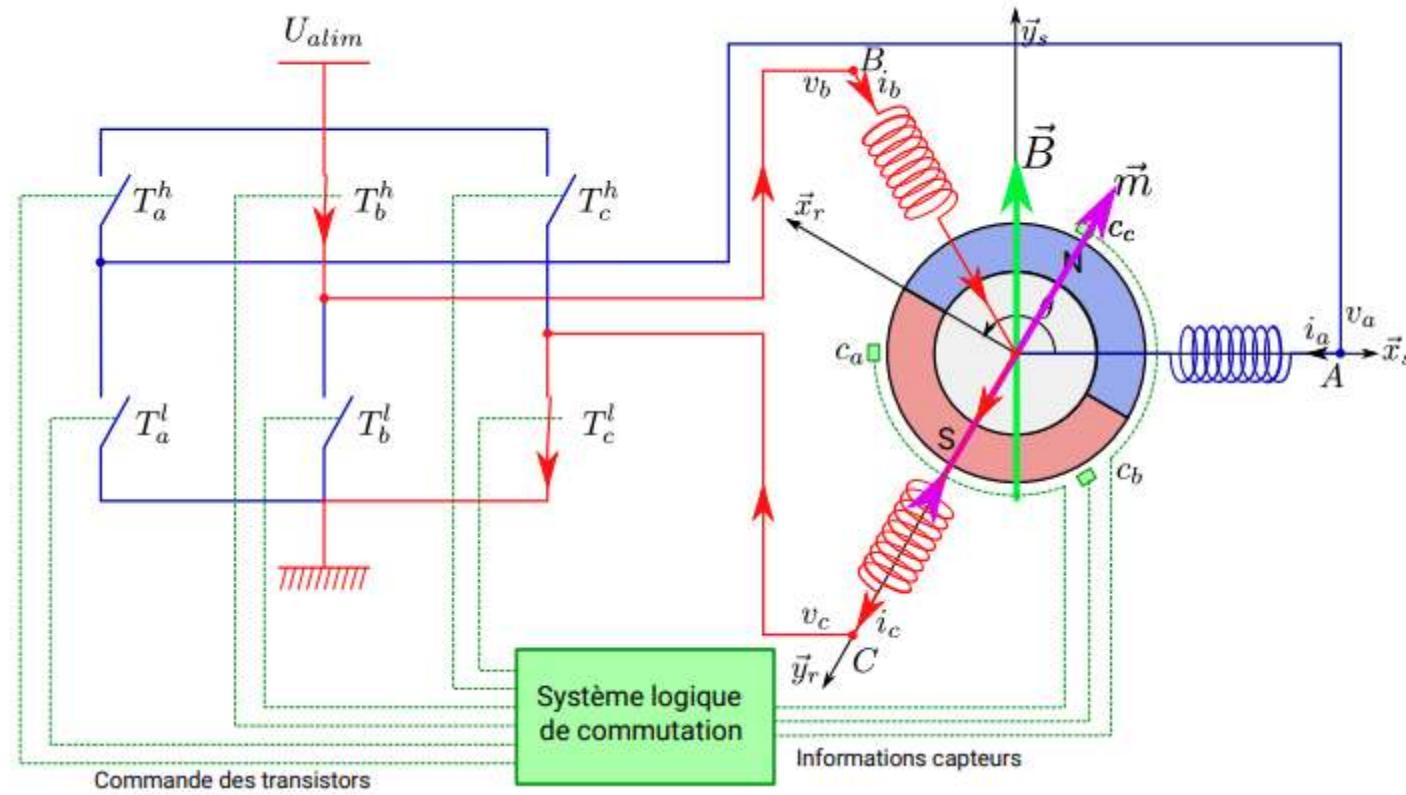
Inconvénients

- Durabilité à long terme
- Coût

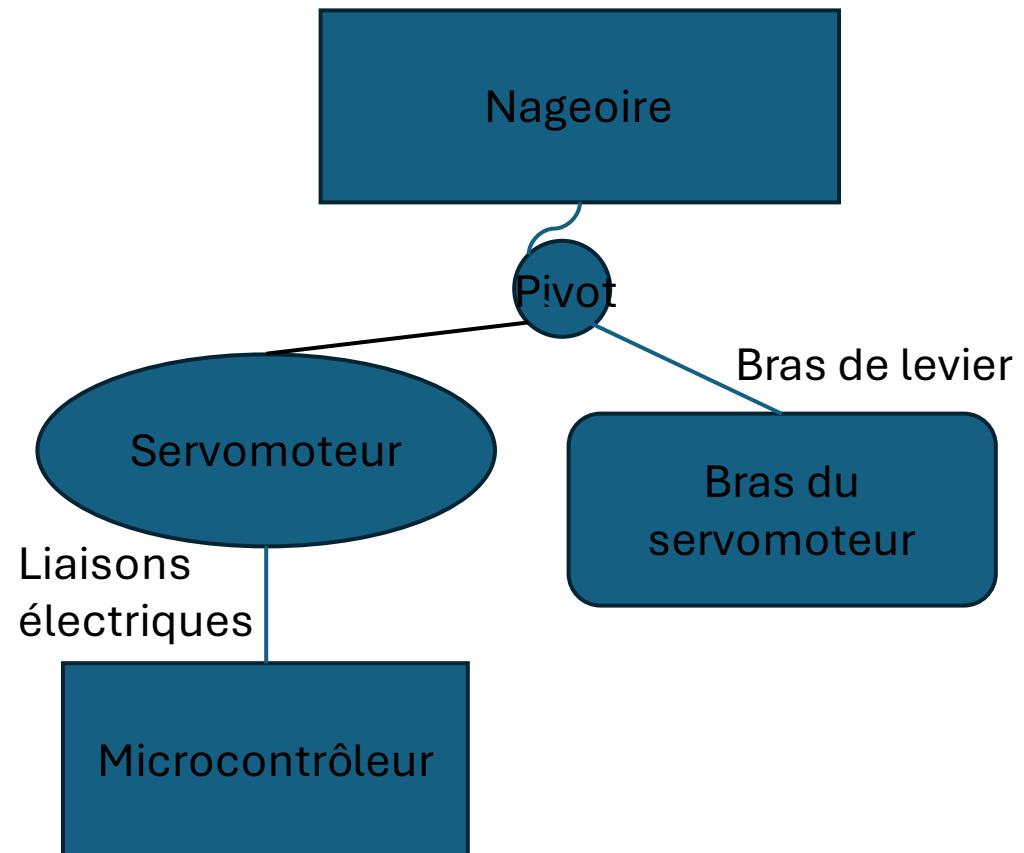
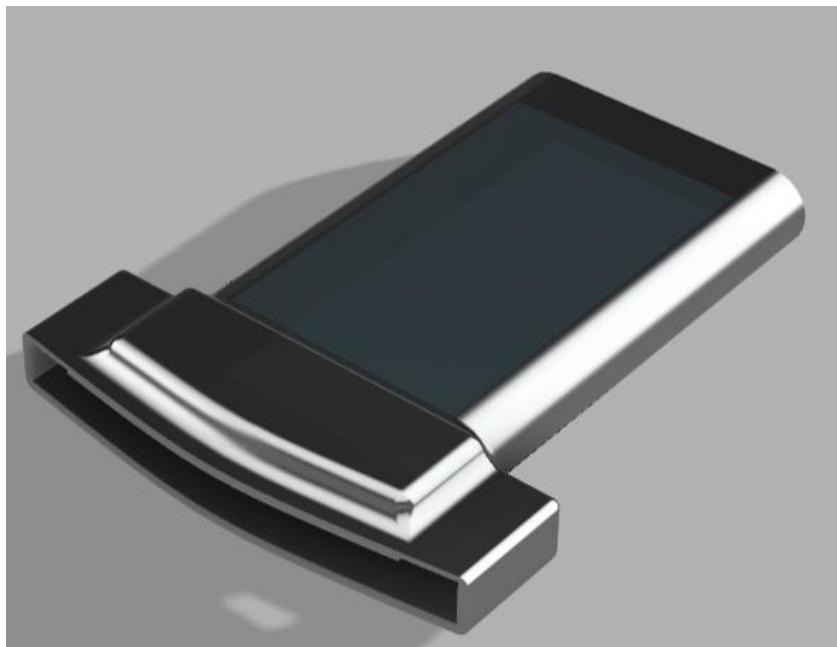
Servomoteur brushless



Commutation électronique

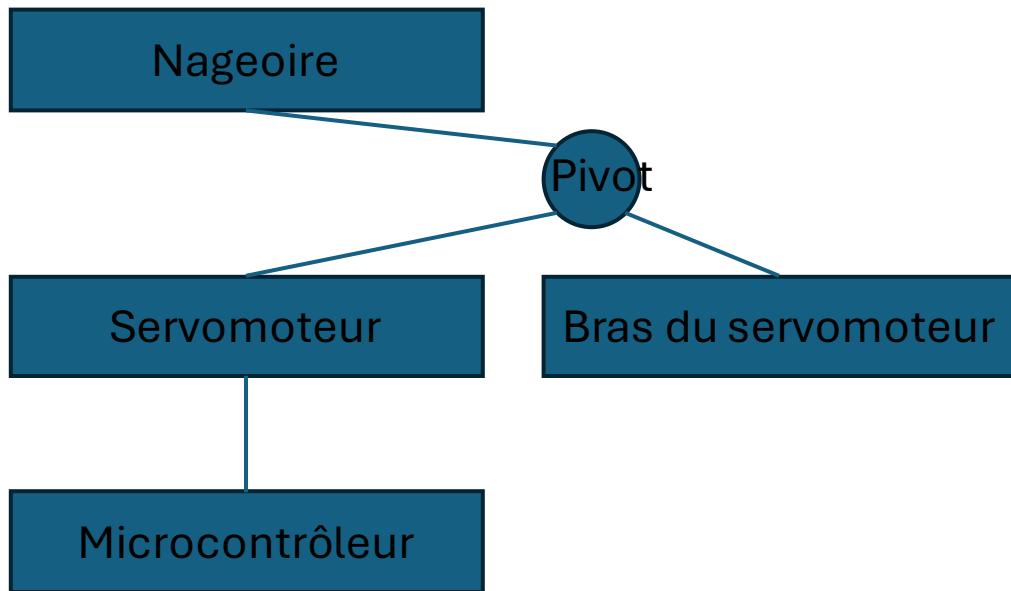


Relier la nageoire au moteur



Conclusion

- Fabrication de la nageoire :
 - Modélisation 3D
 - Imprimer en 3D
- Système de transmission :



**La suite dans
un an**

Source : 9005-moteurs-brushless-v3.pdf (education.fr)
[NUS-developed manta ray robot swims faster and operates up to 10 hours](http://NUS-developed-manta-ray-robot-swims-faster-and-operates-up-to-10-hours)
[Development of propulsion mechanism for Robot Manta Ray | IEEE Conference Publication](http://Development-of-propulsion-mechanism-for-Robot-Manta-Ray-IEEE-Conference-Publication) | IEEE Xplore