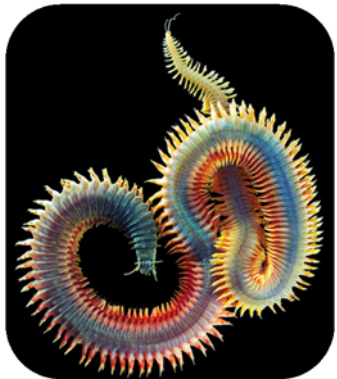


# Robot Locomotion on Sand Inspired by Marine Worms

## Bio-inspired Robotics

- Challenging problems in robotics approached in a novel way
- Inspired by the morphology and the behavior of **living organisms**
- **Crawling robots** inspired by the outstanding capabilities of the **polychaete annelid marine worms**



## Why is it important?

- Crawl on a variety of difficult, soft and **unstructured terrains**: sand, mud, vegetation, and more
- Monitor and maintain terrestrial and coastal difficult-to-access infrastructure
- Observe delicate coastal ecosystems



## How is it done?

- **Undulations** of a long body ...
- ... assisted by the **paddling** of lateral appendages
- Compliant body for **adaptation** to terrain irregularities

## What's next?

- Become able to **swim** underwater
- Add **sensors** for navigating, and observing the surroundings
- Add **tools** for interacting (grasp, cut, ...)
- Applications in medical interventions, search-and-rescue operations, planetary exploration