

 NTNU AMOS

Centre for Autonomous Marine  
Operations and Systems



# A New Class of Marine Robots: From Nature – through University – into Industry

Professor Kristin Y. Pettersen, NTNU

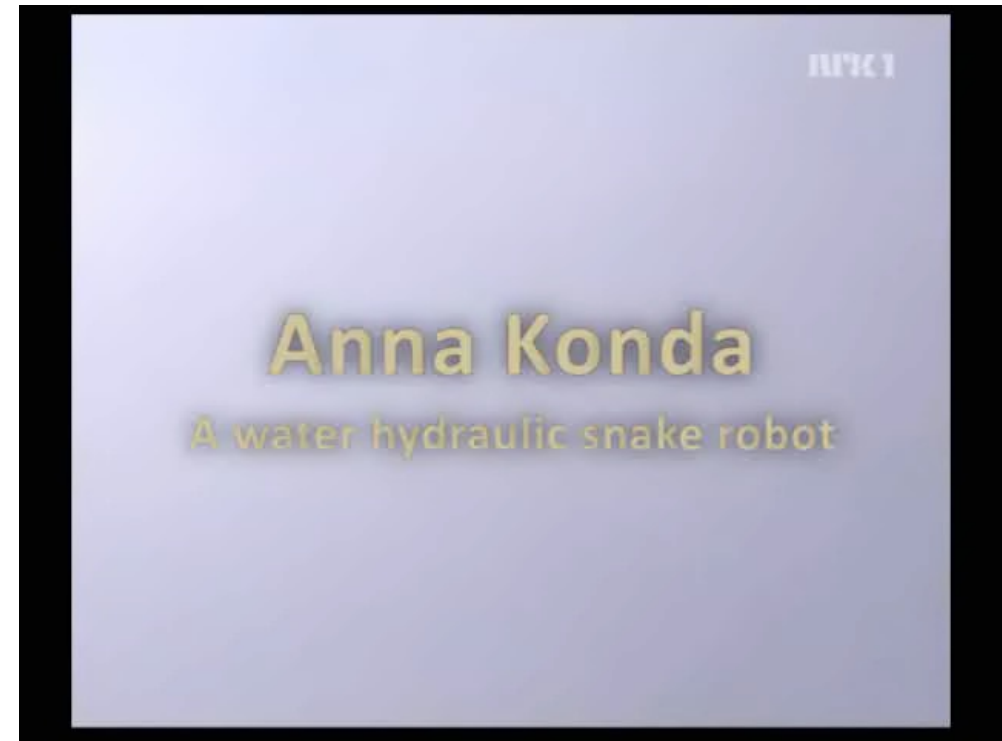
VISTA Day  
February 5 - 6, 2024

# BIO-INSPIRATION

# ANNA KONDA

- Length: 3 m
- Weight: 75 kg
- Num joints: 20
- The first water-hydraulic snake robot in the world.

Slashdot: [Anna Konda, the Robotic Firefighter](#),  
Engadget: [Anna Konda: the firefighting snakebot](#),  
Technovelgy: [Robotic Fire Hose Anna Konda](#),  
Innovations report: [Snake robot to the rescue](#).  
Dagbladet 15.02.2005: [Verdens mest avanserte  
brannslange](#).

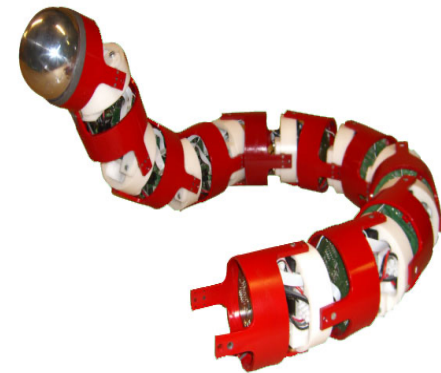


# AIKO

Snake robot with electric motors

- DC motor actuation
- Length: 1.5 m
- Weight: 7 kg
- 20 DOF

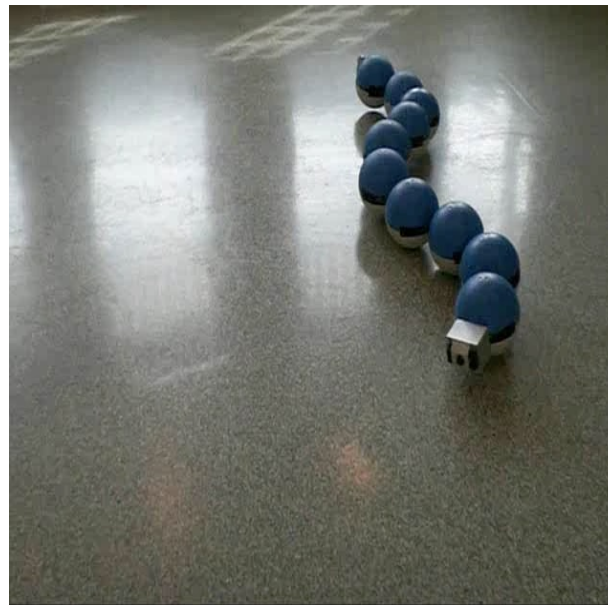
# AIKO Obstacle-aided locomotion



# KULKO

A snake robot with tactile sensors

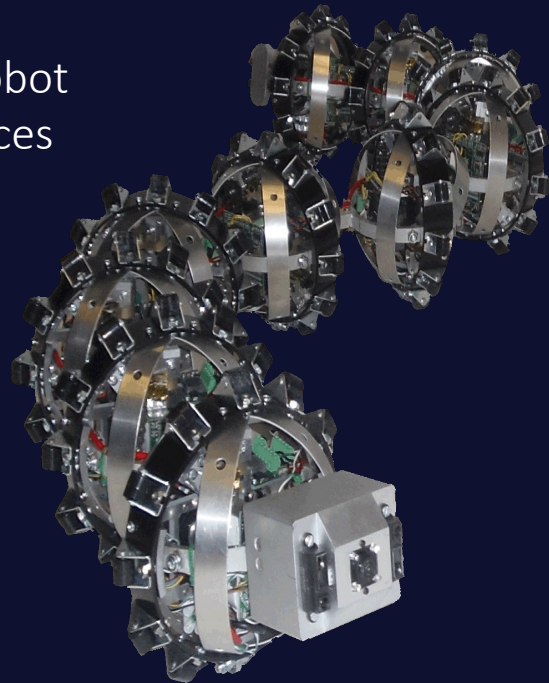
- A smooth gliding surface
- Contact force sensors



# WHEEKO

A snake robot with passive wheels

Developed to study snake robot locomotion across flat surfaces

















# THE EELUME CONCEPT



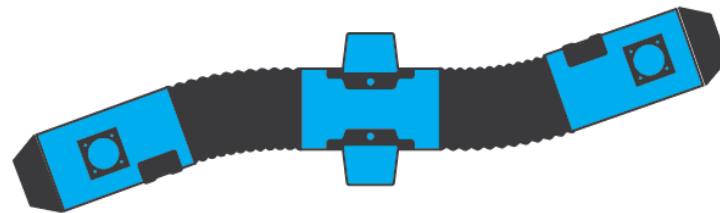
RANGE  
(AUV)



ACCESS  
(Small ROV)



INTERVENTION  
(wROV)



FROM BIOLOGY



THROUGH UNIVERSITY RESEARCH



TOWARDS INDUSTRY:

EELUME

EELUME WAS  
ESTABLISHED  
IN 2015



Forskingsrådet



EELUME WAS  
ESTABLISHED  
IN 2015

Business development

Focus: Customer needs





**Eelume**

SUBSEA INTERVENTION

Testing at PREZIOSO Linjebygg  
Subsea Test Center





KONGSBERG



equinor