

# Underwater Challenges

Sistema FIEB



PELO FUTURO DA INOVAÇÃO

## REASEARCH FIELD

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# A problem

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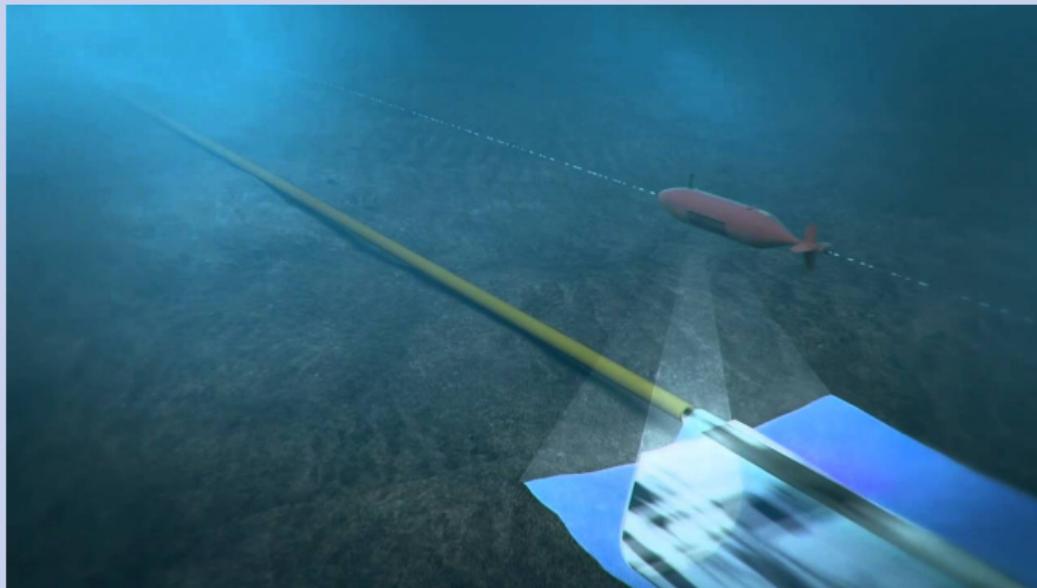
Subsea pipe monitoring is an important application for the oil and gas industry to carry out **maintenance** that can **predict great damage** to the environment and monetary loss.



# A solution

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Underwater robotics are a good way to try solve this problem or at least minimize.



# The Challenges

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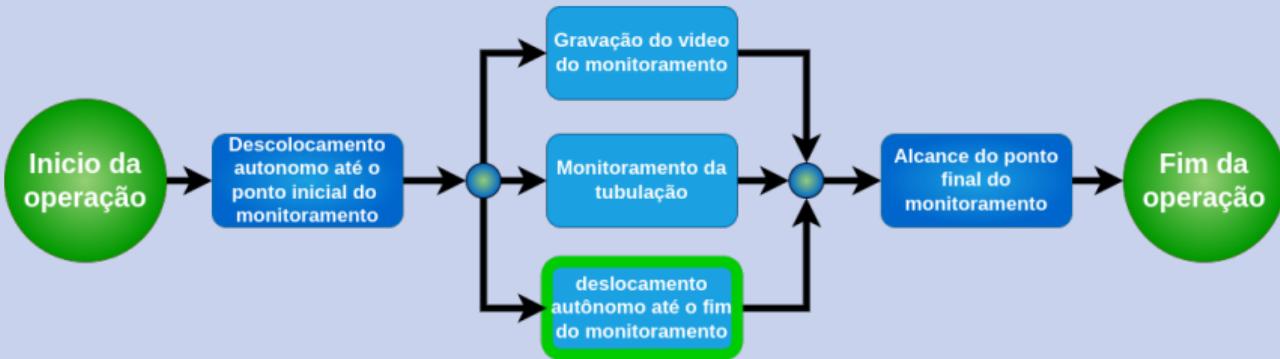
The tasks the should be implement is operate a pipefollowing using undewrater vehicle BlueROV in a simulation at Gazebo.

There are two challenges:

- A global
- A focused on underwater robotics field



# Global Challenge



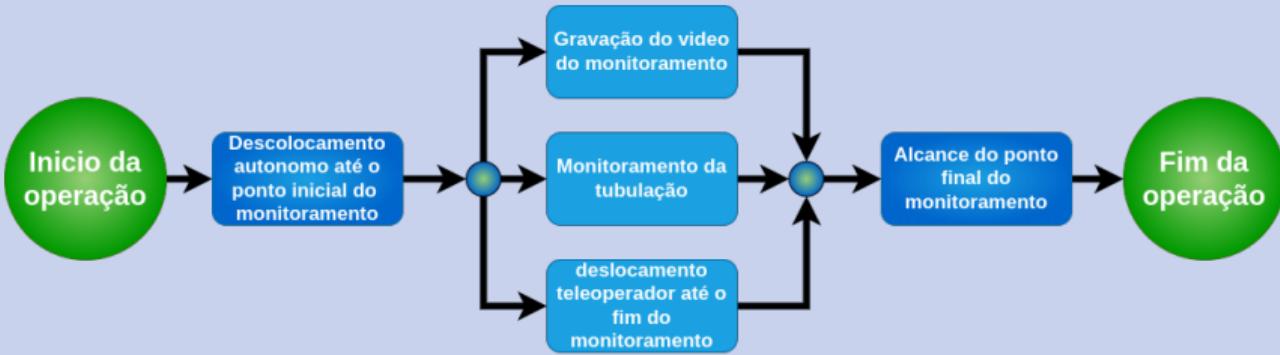
# Minimal requirements

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# Gains

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# Field Challenge



# Minimal requirements

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# Gains

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# Main Tools

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In this Field of **Reasearch** and **developoments** there are great tools that can be used.  
On the **research spectrum**



CmapTools



Scopus



# Main Tools

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On the **development research spectrum**

ROS



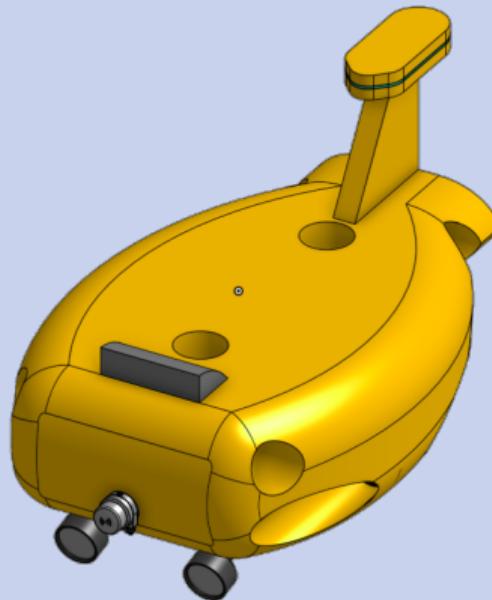
OpenVFOAM®

# Projects

# turBOT

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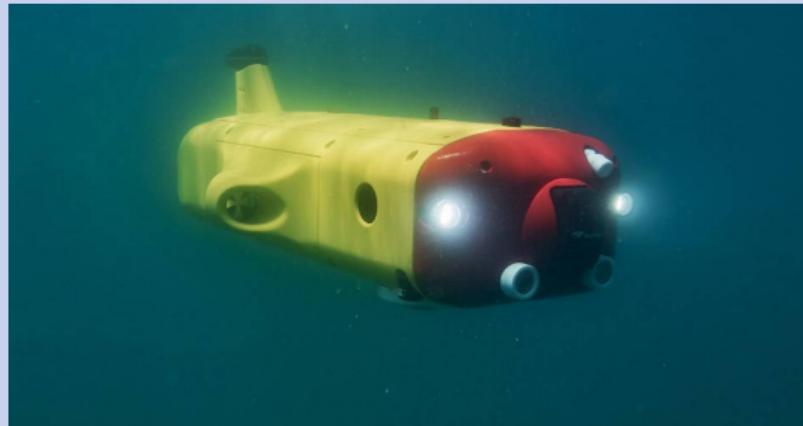
The goal is to develop a short size AUV to operate in shallow waters.



# FlatFish@ROS

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This project is aimed to bring all stuff of FlatFISH to work on ROS



# Pirabots

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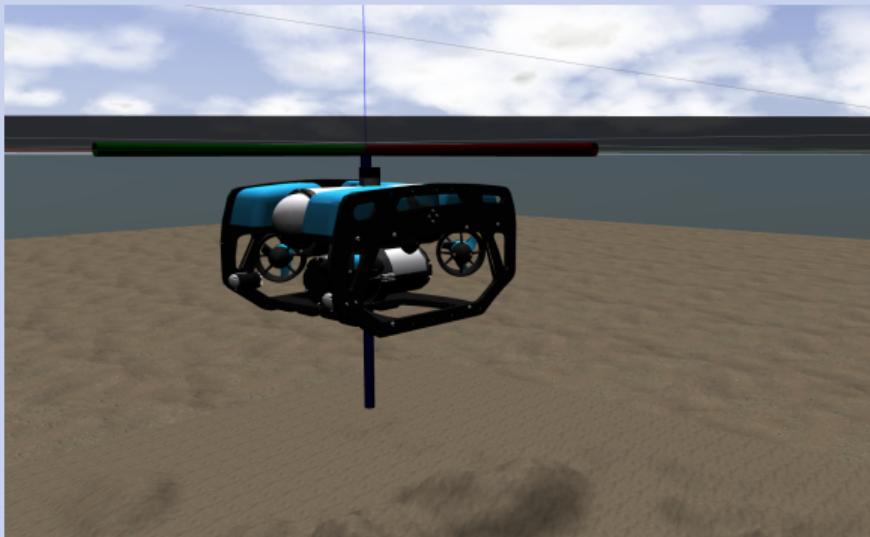
The goal is to test functionalities on ROVs: BlueROV and BirROV.



# Challenges

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Pipeline identification - Solo  
Pipeline Following - In Group



# Members

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The members of the line of research are:



Marco Reis



Alexandre Adonai



Matheus Anselmo



Tâmara Lins

# References (1)

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# Questions?

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