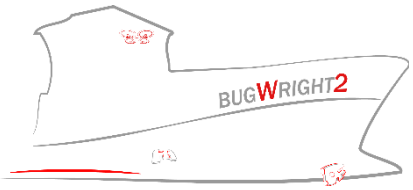
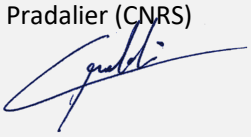


Autonomous Robotic Inspection and Maintenance on Ship Hulls and Storage Tanks

Deliverable report – D6.2

Context	
Deliverable title	Multi-Robot visual inspection and execution control
Lead beneficiary	LSL
Author(s)	Pasquale Grippa (LSL), Khalil Youssefi (LSL), Denis Chernov (LSL), Micha Sende (LSL), Milan Ilic (LSL), Melanie Schranz (LSL), Jennifer Simonjan (LSL), Olivier Simonin (INSA), Johan Faure (INSA), Alessandro Renzaglia (INSA), Antoine Rochebois (INSA)
Work Package	WP06
Deliverable due date	September 2023 (M45)
Document status	
Version No.	1
Type	Demonstration
Dissemination level	**PUBLIC**
Last modified	27 March 2024
Status	RELEASED
Date approved	27 March 2024
Approved by Coordinator	Prof. Cédric Pradalier (CNRS) Signature: 
Declaration	Any work or result described therein is genuinely a result of the BUGWRIGHT2 project. Any other source will be properly referenced where and when relevant.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No. 871260

Executive summary

This document shows the design algorithms to control a fleet of UAVs performing visual inspection of ship hulls for the deliverable D6.2.

The task 6.2 *Multi-crawler inspection planning and execution control* focuses on structure inspection with a group of tethered and possibly heterogeneous crawlers in their aerial or underwater versions, with or without cleaning payloads. The video is divided into several parts: problem definition, design and development of 2.5D simulator, design of a TSP-based and frontier-based algorithm, evaluation of the algorithms, design and development of a software stack base on ROS, deployment TSP-based algorithm on UAVs and demonstration, and conclusion.

The demonstration video can be found here:
https://www.bugwright2.eu/nextcloud/index.php/s/W5g7QQp43td6LiK