REMODEL

REMODEL - Robotic tEchnologies

for the Manipulation of cOmplex

DeformablE Linear objects

Deliverable 8.3 –

DISSEMINATION AND COMMUNICATION PLAN (UPDATE M42)

_____

Version 2021-10-31

Project acronym: REMODEL
Project title: Robotic tEchnologies for the Manipulation of cOmplex DeformablE Linear
Grant Agreement No.: 870133
ObjectsTopic: DT-FOF-12-2019
Call Identifier: H2020-NMBP-TR-IND-2018-2020
Type of Action: RIA
Project duration: 48 months
Project start date: 01/11/2019
Work Package: WP8 – Communication/Dissemination, Exploitation and Knowledge Management
Lead Beneficiary: UNIBO
Authors: All partners
Dissemination level: Public
Delivery update: 31/03/2023
Project website address: https://remodel-project.eu

Table of Contents

1   Executive Summary

This is the update of the document corresponding to the M42.

The document describes the dissemination approach that will be followed during REMODEL project and lists targeted dissemination platforms, in order to ensure sustainability and transferability of REMODEL project results to increase their value and impact and to reach key stakeholders.

This deliverable explains the dissemination procedure and lists the different activities carried out up to M42 and future activities.

The activities contained in this document are as follows:

- List of scientific publications
- Detailed information of scientific publications (once published)
- General and business publications
- Events: Conferences, seminars, workshops, and webinars
- Blog posts
- Collaboration & cooperation with other projects, programmes, working groups, initiatives…
- Report of the collaboration & cooperation activities
- Press Releases
- Other dissemination activities

2   Introduction

REMODEL result will be disseminated throught scientific publications, conferences, workshops, summer schools, fairs, local and international events. All the partners have experience on such activities and are motivated to disseminate in the best way all the project's developments.

The scope of the dissemination strategy is to:

- enable discussion with end-users on how to fully take advantage of the REMODEL outcomes.

- show how the outcomes are relevant, creating jobs and introducing novel technologies in the European market.

- make better use of the results, by making sure they are taken up by decision-makers to influence policymaking and by industry and the scientific community to ensure follow-up.

- show how European collaboration has achieved more than would have otherwise been possible, notably in achieving scientific excellence, contributing to competitiveness, and solving societal challenges.

- give enough technical details and/or performance indicators to allow a comprehension of the design and an appreciation of the benefit coming from the project (with proper safeguarding of IPR).

- communicate the developed results to the scientific community.

- communicate the achievements of the project amongst other industries to improve their access to research results and to explore additional applications of the new technologies.

3   Dissemination procedure

A common dissemination policy is incorporated from all partners in order to avoid any conflict with the commercial interests of the partners. Each partner is free to participate in any dissemination activity and present its developments to the public according to the public. The publication or presentation of intellectual property, results, documents, etc. not publicly accessible, namely when it has the status of "restricted", needs the written approval of the owner of the intellectual property, results, documents etc. Intellectual property having the status of "confidential" must not be presented under any circumstances in any dissemination activity.

The following are considered dissemination and communication activities:

- Exhibition stands and demos

- Public project presentation

- Publications in relevant scientific journals

- Participation in non-project workshops, forums and/or events

- Production of newsletters, leaflets, posters, etc.

- Special sessions organization

- Publications on social media

- Opening of PhD positions

- Organization of a conference

- Organization of a workshop

- Press release

- Non-scientific and non-peer-reviewed publication (popularised publication)

- Exhibition

- Training

- Website

- Communication Campaign (e.g. Radio, TV)

- Participation to a conference

- Participation to a workshop

- Participation to an event other than a conference or workshop

- Video/film

- Brokerage event

- Pitch event

- Trade fair

- Other

After the realization of any dissemination activity, the involved partner(s) should provide a copy of the final disseminated material to the dissemination leader who keeps record of all the dissemination activities of REMODEL for all the partners and store it in the internal REMODEL repository. Information about the activity, number and type of people reached in the context of the dissemination activity is also registered in the document "Dissemination monthly report". Each partner should update the document monthly.

The type of audience is categorized in the following groups, based on the ECAS portal classification:

- Scientific community (higher education, research)
- Industry
- Civil society
- General public
- Policy makers
- Media
- Investors
- Customers
- Other

4 Dissemination plan

4.1 List of scientific publications

List of publications: planned and submitted but not yet accepted

Table 1. List of Scientific Publications

Title of the article	Event and publication (name, date, other info)	Name of author and Organisations
Calibration of Eye-In-Hand Rangefinders: A Benchmark	IROS 2020 (planned to be submitted by March 1st)	Arne Peters, Lukas Vordemann, Alois Knoll
Real Time Collision Avoidance with GPU-Computed Distance Maps	IEEE Transactions on Industrial Informatics	Wendwosen Bellete Bedada, Gianluca Palli UNIBO
Wrinkles Detection and Clothes Manipulation for Robotized Laundry	IEEE Robotics and Automation Letters	Caporali, Alessio; Bedada, Wendwosen Bellete; Palli, Gianluca UNIBO
DLO3DS: Deformable Linear Objects 3D Shape Estimation and Tracking from Multiple 2D Views	IEEE Transactions on Automation Science and Engineering	Alessio Caporali, Kevin Galassi, Gianluca Palli UNIBO
Graphical visualization of contact forces and hand movements during in-hand manipulation	Industrial 27th Annual Conference of the IEEE Electronics Society (IES) ETFA 2022. 6 – 9 September 2022	Raúl Suárez (UPC) and Andrés Montaño (TECNALIA)
A Method for Understanding and Digitizing Manipulation Activities using Programming by Demonstration in Robotic Applications	Elsevier Robotics and Autonomous Systems	Pablo Malvido Fresnillo, Saigopal Vasudevan, Wael M. Mohammed, Jose L. Martinez Lastra (TAU), Jose A. Perez Garcia (UVIGO).
An Approach based on Machine Vision for the identification and shape estimation of deformable linear objects	Elsevier: Mechatronics	Pablo Malvido Fresnillo, Saigopal Vasudevan, Wael M. Mohammed, Jose L. Martinez Lastra (TAU), Jose A. Perez Garcia (UVIGO).
Extending the Motion Planning Framework—MoveIt with Advanced Manipulation Functions for Industrial Applications	Elsevier: Robotics and Computer-Integrated Manufacturing	Pablo Malvido Fresnillo, Saigopal Vasudevan, Wael M. Mohammed, Jose L. Martinez Lastra (TAU), Jose A. Perez Garcia (UVIGO).
Towards the automation of wire harness manufacturing: a robotic manipulator with sensorized fingers	2023 9th International Conference on Control, Decision and Information Technologies (CoDIT)	Andrea Govoni (UNIBO), Gianluca Laudante (UCLV), Michele Mirto (UCLV), Ciro Natale (UCLV), Salvatore Pirozzi (UCLV)

4.2   Detailed information of scientific publications (once published)

Publications once they have been accepted

Table 2. List of Scientific Publications (detailed info)

Title	Authors	Title of the periodical or the series	Number, date or frequency	Publisher	Place of publication	Year	Relevant pages	Permanent identifiers (if available)	Is/Will open access be provided to this publication? In case YES ¿Gold (add cost) or Green(add months)?	Repository link
Extrinsic Calibration of an Eye-In-Hand 2d Lidar Sensor in Unstructured Environments Using ICP	Arne Peters, Adam Schmidt, Alois Knoll	IEEE Robot & Automation Letters	5 (2)	IEEE	IEEEXplore	2020	929--936	10.1109/LRA.2020.2965878	Yes/Gold/0	https://zenodo.org/record/3817196#.YJzQSqgzaUk
SEMG-Based Human-in-the-Loop Control of Elbow Assistive Robots for Physical Tasks and Muscle Strength Training	R. Meattini, D. Chiaravalli, G. Palli and C. Melchiorri	*IEEE Robotics and Automation Letters*	vol. 5, no. 4, Oct. 2020	IEEE	IEEEXplore	2020	5795-5802	10.1109/LRA.2020.3010741	Yes/Green/6Months	https://cris.unibo.it/handle/11585/768135
Model-based Manipulation of Deformable Linear Objects by Multivariate Dynamic Splines	Gianluca Palli	Proceedings of the ICPS 2020 Conference	t.b.a.	IEEE	IEEEXplore	2020	520–525	10.1109/ICPS48405.2020.9274730	Yes/Green/0	https://cris.unibo.it/handle/11585/796312#.YJzQgagzaUk

Title	Authors	Title of the periodical or the series	Number, date or frequency	Publisher	Place of publication	Year	Relevant pages	Permanent identifiers (if available)	Is/Will open access be provided to this publication? In case YES ¿Gold (add cost) or Green(add months)?	Repository link
A Low Cost Tactile Sensor for Large Surfaces Based on Deformable Skin with Embedded IMU	Yuki Iwamoto, Roberto Meattini, Davide Chiaravalli, Gianluca Palli, Koji Shibuya, Claudio Melchiorri	Proceedings of the ICPS 2020 Conference	t.b.a.	IEEE	IEEEXplore	2020	501-506	10.1109/ICPS48405.2020.9274737	Yes/Green/0	https://cris.unibo.it/handle/11585/785153#.YJzQjKgzaUk
Safe and Energy Efficient Robotic System for Industrial Automatic Tests on Domestic Appliances: Problem Statement and Proof of Concept	Bedada, Wendwosen Belete; Kalawoun, Rawan; Ahmadli, Ismayil; Palli, Gianluca	Procedia Manufacturing	t.b.a.	Elsevier	Online	2020	454–461	10.1016/j.promfg.2020.10.064	Yes/Gold/490€	https://cris.unibo.it/handle/11585/796314#.YJzQo6gzaUk
Pointcloud-based Identification of Optimal Grasping Poses for Cloth-like Deformable Objects	Alessio Caporali, Gianluca Palli	Proceedings of the ETFA 2020 Conference	t.b.a.	IEEE	IEEEXplore	2020	581-586	10.1109/ETFA46521.2020.9211879	Yes/Green/0	https://cris.unibo.it/handle/11585/796278#.YJzQsqgzaUk
Effective Deployment of CNNs for 3DoF Pose Estimation and Grasping in Industrial Settings	De Gregorio, Daniele; Zanella, Riccardo; Palli, Gianluca; Di Stefano, Luigi	Proceedings of the ICPR 2020 Conference	t.b.a.	IEEE	IEEEXplore	2020	t.b.a.	t.b.a.	Yes/Green/0	https://arxiv.org/abs/2012.13210

Title	Authors	Title of the periodical or the series	Number, date or frequency	Publisher	Place of publication	Year	Relevant pages	Permanent identifiers (if available)	Is/Will open access be provided to this publication? In case YES ¿Gold (add cost) or Green(add months)?	Repository link
Auto-generated Wires Dataset for Semantic Segmentation with Domain-Independence	Zanella, R., Caporali, A., Tadaka, K., De Gregorio, D., Palli, G.	Proceedings of the 2021 International Conference on Computer, Control and Robotics, ICCCR 2021	t.b.a.	IEEE	IEEEXplore	2021	292–298	10.1109/ICCCR49711.2021.9349395	Yes/Green/0	https://cris.unibo.it/handle/11585/816515#.YJzQzqgzaUk
An Approach for Modeling Grasping Configuration Using Ontology-based Taxonomy	Wael M. Mohammed, Pablo Malvido Fresnillo, Saigopal Vasudevan, Žiga Gosar, Jose L. Martinez Lastra	Proceedings of the ICPS 2020 Conference	t.b.a.	IEEE	IEEEXplore	2020	t.b.a.	t.b.a.	Yes. Green.No embargo	An Approach for Modeling Grasping Configuration Using Ontology-based Taxonomy (tuni.fi)
Training an Under-actuated Gripper for Grasping Shallow Objects Using Reinforcement Learning	Wael M. Mohammed, Mirosław Nejman, Fernando Castaño, Jose L. Martinez Lastra, Stanisław Strzelczak, Alberto Villalonga	Proceedings of the ICPS 2020 Conference	t.b.a.	IEEE	IEEEXplore	2020	t.b.a.	t.b.a.	Yes. Green. No embargo	https://trepo.tuni.fi/handle/10024/130115

Title	Authors	Title of the periodical or the series	Number, date or frequency	Publisher	Place of publication	Year	Relevant pages	Permanent identifiers (if available)	Is/Will open access be provided to this publication? In case YES ¿Gold (add cost) or Green(add months)?	Repository link
Optical Force/Tactile Sensors for Robotic Applications	Marco Costanzo and Salvatore Pirozzi UCLV	IEEE Instrumentation & Measurement MagazineSpecial Issue on "Optical measurements"	21	IEEE	IEEEXplore	2021	28-35	https://doi.org/10.1109/MIM.2021.9491003	Yes/Green/6 months	
Tactile Sensors for Parallel Grippers: Design and Characterization	Andrea Cirillo , Marco Costanzo , Gianluca Laudante and Salvatore Pirozzi UCLV	MDPI Sensors	21,1915	MDPI	MDPI on line	2021	20	https://doi.org/10.3390/s21051915	Yes/Gold/0	https://zenodo.org/record/4672281#.YJzRCqgzaUk
New Metrics for Industrial Depth Sensors Evaluation for Precise Robotic Applications	Cop, Konrad P.; Peters, Arne; Žagar, Bare L; Hettegger, Daniel; Knoll, Alois C	2021 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)	2021	IEEE	IEEEXplore	2021		t.b.a.		https://mediatum.ub.tum.de/node?id=1616006&change_language=en
Combining Vision and Tactile Data for Cable Grasping	Alessio Caporali, Kevin Galassi, Gianluca Laudante,	IEEE/ASME International Conference on Advanced Intelligent	t.b.a.	IEEE/ASME	IEEEXplore	2021	436–441	10.1109/AIM46487.2021.9517447	Yes. Green. No embargo	http://hdl.handle.net/11585/832137

Title	Authors	Title of the periodical or the series	Number, date or frequency	Publisher	Place of publication	Year	Relevant pages	Permanent identifiers (if available)	Is/Will open access be provided to this publication? In case YES ¿Gold (add cost) or Green(add months)?	Repository link
	Gianluca Palli, Salvatore Pirozzi UNIBO/UCLV	Mechatronics AIM 2021								
Validating DLO Models from Shape Observation	Gianluca Palli, Salvatore Pirozzi UNIBO/UCLV	IEEE/ASME International Conference on Advanced Intelligent Mechatronics AIM 2021	t.b.a.	IEEE/ ASME	IEEEXplore	2021	430–435	10.1109/AIM46487.2021.9517570	Yes. Green. No embargo	http://hdl.handle.net/11585/834227
3D DLO Shape Detection and Grasp Planning from Multiple 2D Views	Alessio Caporali, Kevin Galassi, Gianluca Palli UNIBO	IEEE/ASME International Conference on Advanced Intelligent Mechatronics AIM 2021	t.b.a.	IEEE/ ASME	IEEEXplore	2021	424–429	10.1109/AIM46487.2021.9517655	Yes. Green. No embargo	http://hdl.handle.net/11585/832128
Robot Learning-based Pipeline for Autonomous Reshaping of a Deformable Linear	Riccardo Zanella and Gianluca Palli UNIBO	IEEE Access	t.b.a.	IEEE	IEEEXplore	2021	t.b.a.	t.b.a	Yes/Gold/0	t.b.a.

Title	Authors	Title of the periodical or the series	Number, date or frequency	Publisher	Place of publication	Year	Relevant pages	Permanent identifiers (if available)	Is/Will open access be provided to this publication? In case YES ¿Gold (add cost) or Green(add months)?	Repository link
Object in Cluttered Backgrounds										
Beyond the Baseline: 3D Reconstruction of Tiny Objects With Single Camera Stereo Robot	Daniele De Gregorio, Matteo Poggi, Pierluigi Zama Ramirez, Gianluca Palli, Stefano Mattoccia and Luigi Di Stefano UNIBO	IEEE Access	9	IEEE	IEEEXplore	2021	119755-119765	10.1109/AC-CESS.2021.3108626	Yes/Gold/0	http://hdl.handle.net/11585/833523
Combining Unsupervised Muscle Co-Contraction Estimation with Bio-Feedback allows Augmented Kinesthetic Teaching	Meattini, Roberto; Chiaravalli, Davide; Biagiotti, Luigi; Palli, Gianluca; Melchiorri, Claudio UNIBO	IEEE Robotics and Automation Letters	4(6)	IEEE	IEEEXplore	2021	6180 - 6187	10.1109/LRA.2021.3092269	Yes/Green/6 months	http://hdl.handle.net/11585/834309
Exploiting In-Hand Knowledge in Hybrid Joint-Cartesian Mapping for Intuitive Teleoperation of	Roberto Meattini, Davide Chiaravalli, Gianluca Palli,	IEEE Robotics and Automation Letters	6(3)	IEEE	IEEEXplore	2021	5517 - 5524	10.1109/LRA.2021.3078658	Yes/Green/6 months	http://hdl.handle.net/11585/834307

Title	Authors	Title of the periodical or the series	Number, date or frequency	Publisher	Place of publication	Year	Relevant pages	Permanent identifiers (if available)	Is/Will open access be provided to this publication? In case YES ¿Gold (add cost) or Green(add months)?	Repository link
Anthropomorphic Robotic Hands	Claudio Melchiorri UNIBO									
New Model-Based Manipulation Technique for ReshapingDeformable Linear Objects	Alaa Khalifa and Gianluca Palli UNIBO	The International Journal of Advanced Manufacturing Technology	t.b.a.	Springer	Online	2021	t.b.a.	10.1007/s00170-021-08107-x	Yes/Green/6 months	t.b.a.
Symplectic Integration for Multivariate Dynamic Spline-Based Model of Deformable Linear Objects	Alaa Khalifa and Gianluca Palli UNIBO	Journal of Computational and Nonlinear Dynamics	t.b.a.	ASME	Online	2021	t.b.a.	10.1115/1.4052571	Yes/Green/6 months	t.b.a.
A Cyber-Physical System for Clothes Detection, Manipulation and Washing Machine Loading	Alessio Caporali, Wendwosen Bellete Bedada, Gianluca Palli UNIBO	4th IEEE International Conference on Industrial Cyber-Physical Systems-Special Session on „Cyber-Physical Systems for	t.b.a.	IEEE	IEEEXplore	2021	519 - 524	10.1109/ICPS49255.2021.9468189	Yes/Green/6 months	http://hdl.handle.net/11585/832113

Title	Authors	Title of the periodical or the series	Number, date or frequency	Publisher	Place of publication	Year	Relevant pages	Permanent identifiers (if available)	Is/Will open access be provided to this publication? In case YES ¿Gold (add cost) or Green(add months)?	Repository link
		Deformable Manipulation"								
Robotic Wires Manipulation for Switchgear Cablingand Wiring Harness Manufacturing	Kevin Galassi, Gianluca Palli UNIBO	4th IEEE International Conference on Industrial Cyber-Physical Systems-Special Session on „Cyber-Physical Systems for Deformable Manipulation"	t.b.a.	IEEE	IEEEXplore	2021	531-536	10.1109/ICPS49255.2021.9468128	Yes/Green/6 months	http://hdl.handle.net/11585/832861
Deformable Objects Grasping and Shape Detection with Tactile Fingers and Industrial Grippers	Pablo Malvido Fresnillo, Saigopal Vasudevan, Wael M. Mohammed, Jose L. Martinez Lastra, Gianluca Laudante, Salvatore Pirozzi, Kevin	4th IEEE International Conference on Industrial Cyber-Physical Systems-Special Session on „Cyber-Physical Systems for	t.b.a.	IEEE	IEEEXplore	2021	525 - 530	10.1109/ICPS49255.2021.9468151	Yes/Green/6 months	http://hdl.handle.net/11585/834239

Title	Authors	Title of the periodical or the series	Number, date or frequency	Publisher	Place of publication	Year	Relevant pages	Permanent identifiers (if available)	Is/Will open access be provided to this publication? In case YES ¿Gold (add cost) or Green(add months)?	Repository link
	Galassi, Gianluca Palli TAU/UCLV/UNIBO	Deformable Manipulation"								
Tactile sensor data interpretation for estimation of wire features	Andrea Cirillo, Gianluca Laudante, Salvatore Pirozzi UCLV	MDPI Electronics	10(12), 1458	MDPI	MDPI Online	2021	14	https://doi.org/10.3390/electronics10121458	Yes/Gold/0	https://zenodo.org/record/5553876#.YV65aWLP1PY
Proximity sensor for thin wire recognition and manipulation	Andrea Cirillo, Gianluca Laudante, Salvatore Pirozzi UCLV	MDPI Machines	9(9), 188	MDPI	MDPI Online	2021	24	https://doi.org/10.3390/machines9090188	Yes/Gold/0	https://zenodo.org/record/5553207#.YV65mWLP1PY
Vision-Based Robotic Solution for Wire Insertion with an Assigned Label Orientation	Pasquale Cirillo, Gianluca Laudante, Salvatore Pirozzi UCLV	IEEE Access	Vol. 9	IEEE	IEEEXplore	2021	102278-102289	10.1109/ACCESS.2021.3098472	Yes/Gold/0	https://zenodo.org/record/5553878#.YV65p2LP1PY

Title	Authors	Title of the periodical or the series	Number, date or frequency	Publisher	Place of publication	Year	Relevant pages	Permanent identifiers (if available)	Is/Will open access be provided to this publication? In case YES ¿Gold (add cost) or Green(add months)?	Repository link
Tactile Sensors for Parallel Grippers: Design and Characterization.	Andrea Cirillo; Marco Costanzo; Gianluca Laudante; Salvatore Pirozzi UCLV	MDPI	Sensors, Vol 21, Iss 1915, p 1915 (2021)	MDPI	MDPI Online	2021		10.3390/s21051915	Yes/Gold/0	https://doi.org/10.3390/s2105 1915
Effective Deployment of CNNs for 3DoF Pose Estimation and Grasping in Industrial Settings	Daniele De Gregorio; Riccardo Zanella; Gianluca Palli; Luigi Di Stefano UNIBO	25th International Conference on Pattern Recognition, ICPR 2020	t.b.a.	IEEE	IEEEXplore	2021	7419 - 7426	10.1109/icpr48806.2021.94119 12	Yes/Green/6 months	http://hdl.handle.net/11585/8 41335
Tell Me, What Do You See?—Interpretable Classification of Wiring Harness Branches with Deep Neural Networks	Piotr Kicki; Michal Bednarek; Paweł Lembicz; Grzegorz Mierzwiak; Amadeusz Szymko; Marek	Sensors		MPI	MPIOnline	2021		10.3390/s21134327	YES, Gold, 1442.74 EUR	http://europepmc.org/articles/ PMC8271466

Title	Authors	Title of the periodical or the series	Number, date or frequency	Publisher	Place of publication	Year	Relevant pages	Permanent identifiers (if available)	Is/Will open access be provided to this publication? In case YES ¿Gold (add cost) or Green(add months)?	Repository link
	Kraft; Krzysztof Walas PUT/VW									
Ariadne+: Deep Learning-based Augmented Framework for the Instance Segmentation of Wires	Alessio Caporali, Riccardo Zanella, Daniele De Gregorio, Gianluca Palli UNIBO	IEEE Transactions on Industrial Informatics	t.b.a.	IEEE	IEEE Transactions on Industrial Informatics	2022	t.b.a.	10.1109/TII.2022.3154477	Yes/Green/6 months	10.1109/tii.2022.3154477
Review on Human to Robot Hand Motion Mapping	Roberto Meattini, Raul Suarez, Gianluca Palli, Claudio Melchiorri UNIBO	IEEE TRANSACTIONS ON ROBOTICS	t.b.a.	IEEE	IEEE TRANSACTIONS ON ROBOTICS	2022	t.b.a.	10.1109/TRO.2022.3205510	Yes/Green/6 months	t.b.a.
sEMG-Based Minimally Supervised Regression Using Soft-DTW Neural Networks for Robot	Meattini, Roberto; Bernardini, Alessandra; Palli, Gianluca;	IEEE Robotics and Automation Letters	7(4)	IEEE	IEEE Robotics and Automation Letters	2022	10144–10151	10.1109/LRA.2022.3193247	Yes/Green/6 months	t.b.a.

Title	Authors	Title of the periodical or the series	Number, date or frequency	Publisher	Place of publication	Year	Relevant pages	Permanent identifiers (if available)	Is/Will open access be provided to this publication? In case YES ¿Gold (add cost) or Green(add months)?	Repository link
Hand Grasping Control	Melchiorri, Claudio UNIBO									
Simulative Evaluation of a Joint-Cartesian Hybrid Motion Mapping for Robot Hands Based on Spatial In-Hand Information	R Meattini, D Chiaravalli, G Palli, C Melchiorri UNIBO	Frontiers in Robotics and AI	t.b.a.	Frontiers	Frontiers in Robotics and AI	2022	t.b.a.	https://doi.org/10.3389/frobt.2022.878364	Yes/Gold/0	t.b.a.
Towards a Twisted String Actuated Haptic Device: Experimental Testing of a 2-D Virtual Environment and Teleoperation Interface	Linda Feenstra, Umberto Scarcia, Riccardo Zanella, Roberto Meattini, Davide Chiaravalli, Gianluca Palli, Claudio Melchiorri UNIBO	2021 20th International Conference on Advanced Robotics (ICAR)	t.b.a.	IEEE	IEEE explore	2021	t.b.a.	t.b.a.	Yes/Green/6 months	t.b.a.
FASTDLO: Fast Deformable Linear	Caporali, A., Galassi,	IEEE Robotics and	7(4)	IEEE	IEEE explore	2022	9075–9082	10.1109/LRA.2022.3189791	Yes/Green/6 months	t.b.a.

Title	Authors	Title of the periodical or the series	Number, date or frequency	Publisher	Place of publication	Year	Relevant pages	Permanent identifiers (if available)	Is/Will open access be provided to this publication? In case YES ¿Gold (add cost) or Green(add months)?	Repository link
Objects Instance Segmentation and Modelling	K., Zanella, R., Palli, G. UNIBO	Automation Letters								
Cable Detection and Manipulation for DLO-in-Hole Assembly Tasks	Alessio Caporali, Kevin Galassi, Gianluca Palli UNIBO	5th IEEE International Conference on Industrial Cyber-Physical Systems (ICPS), 24 – 26 May 2022	t.b.a.	IEEE	IEEExplore	2022	t.b.a.	10.1109/ICPS51978 .2022.9817006	Yes/Green/6 months	t.b.a.
Wire Grasping by Using Proximity and Tactile Sensors	Cirillo, A., Laudante, G., Pirozzi, S. (UCLV)	5th IEEE International Conference on Industrial Cyber-Physical Systems (ICPS), 24 – 26 May 2022	t.b.a.	IEEE	IEEEXplore	2022	6	DOI 10.1109/ICPS51978.2022.9816 936	Yes/Green/6 months	https://zenodo.org/record/70 85477#.YyRU9nZBzcs
Point Cloud Registration With Object-Centric Alignment	Bare Luka Zagar; Ekim Yurtsever; Arne Peters; Alois C. Knoll			IEEE		2022		https://doi.org/10.1109/access. 2022.3191352	Yes, gold 1850	https://mediatum.ub.tum.de/d oc/1664081/document.pdf

Title	Authors	Title of the periodical or the series	Number, date or frequency	Publisher	Place of publication	Year	Relevant pages	Permanent identifiers (if available)	Is/Will open access be provided to this publication? In case YES ¿Gold (add cost) or Green(add months)?	Repository link
Real-Time Instance Segmentation of Pedestrians using Transfer Learning	Bare Luka Zagar, Tobias Preintner, Alois C. Knoll	2022 27th International Conference on Automation and Computing		IEEE	Bristol, United Kingdom	2022		https://mediatum.ub.tum.de/doc/1663991/1663991.pdf	Yes/Gold/0	https://mediatum.ub.tum.de/doc/1663991/1663991.pdf
Stability and Convergence Analysis of 3D Feature-Based Visual Servoing,	M. Costanzo, G. De Maria, C. Natale and A. Russo	IEEE Robotics and Automation Letters	vol. 7, no. 4	IEEE	IEEEXplore	2022	12022-12029	10.1109/LRA.2022.3211154	Yes/Green/6	https://zenodo.org/record/7193376#.Y0fUJXZBw2w
An approach for the bimanual manipulation of a deformable linear object using a dual-arm industrial robot: cable routing use case	Pablo Malvido Fresnillo, Saigopal Vasudevan, Wael M. Mohammed (TAU)	5th IEEE International Conference on Industrial Cyber-Physical Systems (ICPS), 24 – 26 May 2022	t.b.a.	IEEE	IEEEXplore	2022	pp. 1-8.	doi: 10.1109/ICPS51978.2022.9816981	Yes/Green/6 months	https://trepo.tuni.fi/handle/10024/141911
DLOFTBs – Fast Tracking of Deformable Linear Objects with B-splines	Piotr Kicki, Amadeusz Szymko, Krzysztof Walas	IEEE *International Conference on Robotics and Automation (ICRA), 29.05-02.06.2023*	t.b.a.	IEEE	IEEEXplore	2023	t.b.a.	t.b.a.	No	https://arxiv.org/abs/2302.13694

Title	Authors	Title of the periodical or the series	Number, date or frequency	Publisher	Place of publication	Year	Relevant pages	Permanent identifiers (if available)	Is/Will open access be provided to this publication? In case YES ¿Gold (add cost) or Green(add months)?	Repository link
Experimental Evaluation Of Intuitive Programming Of Robot Interaction Behaviour During Kinesthetic Teaching Using sEMG And Cutaneous Feedback	R Meattini, D Chiaravalli, K Galassi, G Palli, C Melchiorri	IFAC-PapersOnLine	55 (38), 1-6	IFAC	IFAC-PapersOnLine	2022	1-6		Yes	https://hdl.handle.net/11585/913575
A Weakly Supervised Semi-Automatic Image Labeling Approach for Deformable Linear Objects	Alessio Caporali; Matteo Pantano; Lucas Janisch; Daniel Regulin; Gianluca Palli; Dongheui Lee	IEEE Robotics and Automation Letters	Volume: 8, Issue: 2, February 2023	IEEE	IEEE Xplore	2023	1013 - 1020	10.1109/LRA.2023.3234799	Yes/Green/6 months	https://hdl.handle.net/11585/912164
RT-DLO: Real-Time Deformable Linear Objects Instance Segmentation	Alessio Caporali; Kevin Galassi; Bare Luka Žagar; Riccardo Zanella; Gianluca Palli; Alois C Knoll	IEEE Transactions on Industrial Informatics	t.b.a.	IEEE	IEEE Xplore	2023	t.b.a.	10.1109/TII.2023.3245641	Yes/Green/6 months	t.b.a

4.3 Events: Conferences, seminars, workshops and webinars

Due to the situation of Public Health Emergency reported by WHO due to the covid-19 coronavirus outbreak, many events have been cancelled or postponed, and others have been done online

Table 3. List of events

Event	Date	Name and type of audience	Countries addressed
A&T Automation and Testing	12-14 02 2020	Industry and Scientific community	Turin (Italy)
Innovabiomed	15-16 06 2020	Industry and Scientific community	Verona (Italy)
ACM/IEEE International Conference on Human-Robot Interaction (HRI)	23-26 03 2020	Industry and Scientific community	Cambridge- UK
EU Robotics Forum 2020	03-05 04 2020	Industry and Scientific community	Malaga - Spain
IEEE International Conference on Robotics and Automation (ICRA)	31.05 - 04.06 2020	Industry and Scientific community	Paris - France
Hannover Messe (Hanover Fair) 2020	20-24 05 2020	Industry and Scientific community	Hannover - Germany
Feria internacional de la máquina herramienta (BIEMH)	25-29 05 2020 23-27 10 2020 2022	Industry and Scientific community	Bilbao - Spain
Automatica 2020	16-19 06 2020 08-12 12 2020	Industry and Scientific community	Munchen - Germany
Special Session on „Cyber-Physical Systems for Deformable Manipulation"	09-12 06 2020	Industry and Scientific community	Tampere - Finland

Event	Date	Name and type of audience	Countries addressed
Flexible Automation and Intelligent Manufacturing International Conference FAIM 2020	15-18 06 2021	Industry and Scientific community	Athens – Greece
https://sevilla.bciaerospace.com/es/	16-18 06 2020	BtoB event in Spain, the A&DM Sevilla,	Seville Spain
IFAC World Congress 2020	July 11-17 2020	Industry and Scientific community	Berlin, Germany
IEEE International Conference on Emerging Technologies and Factory Automation, ETFA 2020	08-11 September 2020	Industry and Scientific community	Vienna, Austria
IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)	25/10 - 25/11 2020	Industry and Scientific community	Online
25th International Conference on Pattern Recognition (ICPR 2020)	10-15 January 2021	Industry and Scientific community	Florence, Italy
2021 International Conference on Computer, Control and Robotics, ICCCR 2021	January 8-10, 2021	Industry and Scientific community	Online
The European Robotics Forum 2021 (ERF2021)	13-15 April 2021	Industry and Scientific community	Online
Special Session on „Cyber-Physical Systems for Deformable Manipulation"	10-13 05 2021	Industry and Scientific community	Online
4th IEEE International Conference on Industrial Cyber-Physical Systems ICPS 2021	10-13 05 2021	Industry and Scientific community	Online
IEEE/ASME International Conference on Advanced Intelligent Mechatronics AIM 2021	JULY 12 – 16, 2021	Industry and Scientific community	Online
Invited session on „Mechatronic Systems for the Manipulation of Deformable Objects"	JULY 12 – 16, 2021	Industry and Scientific community	Online
2021 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)	September 28 – Oct 1 2021	Industry and Scientific community	Online

Event	Date	Name and type of audience	Countries addressed
ITM Industry Europe Fairs in Poznan	31 Agust – 3 Sep 2021	Industry and Scientific community	Poznań, Poland
BIEMH 2022	13-17 Jun 2022	Industry and Scientific community	Bilbao,Spain
ETFA 2022	6-9 Sept 2022	Industry and Scientific community	Stuttgart, Germany
2021 20th International Conference on Advanced Robotics (ICAR)	6-10 December 2021	Industry and Scientific community	online
Automatica.it 2022	September 1st-3rd	Industry and Scientific community	Cagliari, Itayl
The European Robotics Forum 2022 (ERF2022)	28-30June 2022	Industry and Scientific community	Online
IEEE International Conference on Robotics and Automation (ICRA)	29.05 - 02.06 2023	Industry and Scientific community	London, Great Britain
ICPS	24-26 May 2022	Industry and Scientific community	Online
IROS	23-27 October 2022	Industry and Scientific community	Kyoto, Japan

4.4 Blog posts

Table 4. Blog posts

Title of blog entry	Main author	Release Date
Kick-off meeting in Bologna	TECNALIA	10-12-2019
Special Session on „Cyber-Physical sistems for deformable object manipulation"	UNIBO	09-01-2020
The PCB of tactile sensors for REMODEL are ready!!!	UCLV	05-02-2020
3D model for IEMA use case is ready!!!	IEMA	16-03-2020
REMODEL use cases	TECNALIA	03-04-2020
Aeronautical sector – ELIMCO use case	ELIMCO	18-06-2020
ICPS Organized by TAU – Special Session on DLOs manipulation	TAU	03-07-2020
Test boards for sensor benchmarking are ready!!!	TUM	01-09-2020
Developing perception algorithms for wiring harnesses manipulation in automotive industry	PUT	18-09-2020
IMPROVEMENT OF WORKCELL ERGONOMICS	ELVEZ	15-10-2020
PROJECT MEETING M12 - VIRTUAL MEETINGS DURING PANDEMIC TIMES OF CORONAVIRUS	VWP	13-11-2020
FINALLY, A REMODEL CHRISTMAS GIFT	ENKI	11-01-2021
2021 SPECIAL SESSION ON "CYBER-PHYSICAL SYSTEMS FOR DEFORMABLE OBJECT MANIPULATION"	UNIBO	19-01-2021
SPECIAL ISSUE "State-of-Art in Sensors for Robotic applications"	UNIBO	01-02-2021
REMODEL sensorized fingers have started to work!	UCLV	10-01-2021
ERF 2021	UNIBO	02-03-2021
IEMA is designing the robotic wire storage station interfacing with the REMODEL UC1	IEMA	25-03-2021
TECNALIA is working on teaching by demostration framework	TECNALIA	06-04-2021
The REMODEL's youtube channel is ready!!!!	TECNALIA	06-05-2021

Robotic platform for aeronautical wiring harnesses manufacturing already in progress	ELIMCO	31-05-2021
TAU lastest updates	TAU	09-07-2021
Results of sensor benchmark publicly avariable	TUM	27-07-2021
IEEE/RSJ International Workshop RoboTac 2021	UCLV	15-09-21
Deformable linear object (DLO) tracking in wire manipulation task	PUT	27-09-21
ELVEZ lastest updates	ELVEZ	21-10-21
UC3 – Development of wiring harness assembly	VWP	12-11-2021
Third edition of the Special Session on "Cyber-Physical Systems for Deformable Object Manipulation" at ICPS2022	UNIBO	10-12-2021
Medical Hose Detection and Tracking	ENKI	21-12-2021
A Robotic Platform for Autonomous Switchgears Connection Testing	UNIBO	14-01-2022
Proximity sensors have been integrated and tested	UCLV	01-02-2022
REMODEL Participates to the Research Topic on "Deformable Object Manipulation"	UNIBO	04-02-2022
IEMA lastest updates	IEMA	22-03-2022
CAD Programming	TECNALIA	19-04-2022
REMODEL's 6th GA Munich	TECNALIA	18-05-2022
Lastest updates from Elimco	ELIMCO	30-05-2022
Wiring harness branches separation	TAU	30-06-2022
Behind the scenes:The REMODEL Calibration Pipeline	TUM	21-07-2022
A new driver for 3D cameras	PUT	28-09-22

Implementation of the Elvez use case	ELVEZ	02-11-22
Robots have been installed at Volkswagen Poznan Plant	VWP	18-11-22
Implementation of the medical hose surface preparation task	ENKI	20-12-22
RoboSECT wins third prize at StartCup Emilia Romagna!	UNIBO	19-01-23
ELVEZ Use Case Implementation Continues	UCLV	09-02-23

4.5 Collaboration & cooperation with other projects, programmes, working groups, initiatives…

We will describe here the projects with which we are collaborating, under which areas and topics, and the status.

Explanation symbols

✔	Collaboration has already started – concrete collaboration activities are reported
✔	Collaboration is envisioned but have not started yet
✖	Collaboration is not feasible Collaboration have started but could not be continued – concrete collaboration activities are not reported

Table 5. Collaboration with other projects

Project	Areas for collaboration	Remark	Status
HORSE	REMODEL will building up upon research-results and open-source software	HORSE will end in April 2020	✔
TRINITY	Artificial Intelligence for the manipulator in ENKI's use case	Possible Collaboration	✔
DIH$_2$	Manipulator for DInking operation	Possible Collaboration	✔
HR - RECYCLER	Human-robot interaction	Workshop	✔

4.6 Report of the collaboration & cooperation activities

Here we will report the collaboration activities performed, date, main conclusions and action points.

Table 6. Collaboration activities

No.	Project(s) Name	Description of activity
1.	HORSE	Joint scientific publication
2.	HR - RECYCLER	Workshop about human robot interaction

4.7 Press Releases

Table 8. Other dissemination Activities

Type	Published in	Partner/Authors
LinkedIn Posts	Linkedin	ENKI
Website posts	ENKI website	ENKI

4.8 Other dissemination activities

Keynotes, workshops, prizes.

Table 7. Other dissemination Activities

Type	Name & Comment	Partner/Authors	Link if appropriate
2020 IEEE Transactions on Automation Science and Engineering Best New Application Paper Award	**Daniele De Gregorio, Riccardo Zanella, Gianluca Palli, Salvatore Pirozzi, Claudio Melchiorri** *"Integration of Robotic Vision and Tactile Sensing for Wire-Terminal Insertion Tasks"* vol. 16, no. 2, pp. 585-598, 2019	UNIBO/UCLV	https://www.ieee-ras.org/awards-recognition/publications-awards/69-awards-recognition/society-awards/67-the-googol-best-new-application-paper-award-sponsored-by-googol-technology-hk-ltd
ICPS 2021 Best Student Paper Award	**Alessio Caporali, Wendwosen Bellete Bedada, and Gianluca Palli**, "A Cyber-Physical System for Clothes Detection, Manipulation	UNIBO	

Type	Name & Comment	Partner/Authors	Link if appropriate
	and Washing Machine Loading"		
Keynote @RoboTac 2021 IEEE/RSJ International Workshop on New Advances in Tactile Sensation, Interactive Perception, Control, and Learning: A Soft Robotic Perspective on Grasp, Manipulation, & HRI, within IROS2021 conference	Salvatore Pirozzi Keynote title: "Force/Tactile Sensor Technology for Robotic Manipulation"	UCLV	https://www.robotact.de/rbotac2021
ICPS 2022 Best Presentation Award	**Pablo Malvido Fresnillo, Saigopal Vasudevan, Wael M. Mohammed**, "An approach for the bimanual manipulation of a deformable linear object using a dual-arm industrial robot: cable routing use case"	ICPS 2022 Best Presentation Award	**Pablo Malvido Fresnillo, Saigopal Vasudevan, Wael M. Mohammed**, "An approach for the bimanual manipulation of a deformable linear object using a dual-arm industrial robot: cable routing use case"

5   Conclusions

Dissemination is the public disclosure of the results of the project. It is a process of promotion and awareness-raising right from the beginning of a project. It makes research results known to various stakeholder groups in a targeted way.

For much of the duration of the project and due to the Public Health Emergency situation reported by the WHO due to the outbreak of coronavirus covid-19, many events were canceled or postponed. But in REMODEL we use social networks and participate in many conferences that were held online to continue spreading the project.

In this final part of the project, face-to-face attendance has been resumed and the task of dissemination has continued satisfactorily.