

# I-RIM

## 2021

8 - 10 Ottobre, Roma

### Friday, Oct 8

Time	Main Stage	NABA 1	NABA 2	NABA 3	NABA 4	Exposition	Totem	
10.00 - 11.00						Registration	Posters Slot 1	
11.00 - 12.00						EXPO	Posters Slot 1 & Meet the Authors	
12.00 - 13.00							Posters Slot 1	
13.00 - 13.30	Lunch							
13.30 - 14.00	Greetings							
14.00 - 14.45	Plenary 1							
15.00 - 16.00		WS1	WS2	WS3	WS4		Posters Slot 2	
16.00 - 17.00		WS1	WS2	WS3	WS4		Posters Slot 2	
17.00 - 18.00		WS1	WS2	WS3	WS4		Posters Slot 2 & Meet the Authors	
18.00 - 18.45	Round Table							
18.45 - 19.30	Plenary 2							
20.30 - 24.00	Social Dinner @ Stadio di Domiziano (Via di Tor Sanguigna, 3, 00186 Roma RM)							

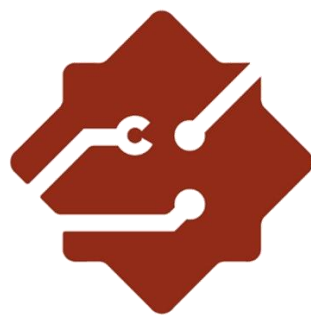
### Saturday, Oct 9

Time	Main Stage	NABA 1	NABA 2	NABA 3	NABA 4	Exposition	Totem	
10.00 - 10.45		WS5	WS6	WS7	WS8	EXPO	Posters Slot 3	
10.45 - 11.45		WS5	WS6	WS7	WS8		Posters Slot 3	
11.45 - 12.45		WS5	WS6	WS7	WS8		Posters Slot 3 & Meet the Authors	
12.45 - 13.30	Lunch							
13.15 - 14.00	Plenary 3							
14.00 - 15.30		I-RIM General Assembly						
15.30 - 16.30		WS9					Posters Slot 4	
16.30 - 17.30		WS9					Posters Slot 4	
17.30 - 18.30		WS9					Posters Slot 4 & Meet the Authors	
18.30 - 19.00								



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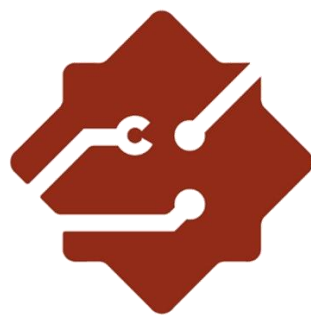
**KUKA**



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## Posters Slot 1 – Friday, Oct 8 Morning

Paper No.	Paper Title & Authors
12	<b>Human activity modelling and recognition for collaborative robotics based on hand-object interaction</b> Niccolo Lucci, Andrea Monguzzi, Andrea Maria Zanchettin and Paolo Rocco
17	<b>A Novel Tactile Device for Safe Human-Robot Interaction in Industrial Scenarios</b> Francesco Grella, Giulia Baldini, Roberto Canale, Si Ao Wang, Alessandro Albin, Michal Jilich, Giorgio Cannata and Matteo Zoppi
19	<b>Framework for collaborative human-robot flexible manufacturing applications</b> Pangcheng David Cen Cheng, Fiorella Sibona and Marina Indri
23	<b>Flexible Scheduling and Wearable Haptics for Human-Robot Collaborative Assembly</b> Riccardo Maderna, Maria Pozzi, Andrea Zanchettin, Paolo Rocco and Domenico Prattichizzo
24	<b>A Smart Workcell for Human-Robot Cooperative Assembly of Carbon Fiber Parts</b> Stefano Ghidoni, Matteo Terreran, Daniele Evangelista, Christian Eitzinger, Sebastian Zambal, Enrico Villagrossi, Nicola Pedrocchi, Nicola Castaman and Marcin Malecha
29	<b>Robot-Assisted Prostate Biopsy with PROST</b> Bogdan Maris, Maria-Camilla Fiazza and Paolo Fiorini
30	<b>Exploiting In-Hand Knowledge in Hybrid Joint-Cartesian Mapping for Anthropomorphic Robotic Hands</b> Roberto Meattini, Davide Chiaravalli, Gianluca Palli and Claudio Melchiorri
31	<b>Deep learning for robotic prostate biopsy</b> Bogdan Maris, Luigi Palladino and Paolo Fiorini
36	<b>Study on Body Positioning of Haptic Feedback in Simulated Human-Robot Cooperative Tasks</b> Leonardo Franco, Domenico Prattichizzo and Gionata Salvietti
43	<b>TENANT: a Tool for Easily Modeling Task Planning Problems for Human-Robot Collaboration</b> Elisa Foderaro, Amedeo Cesta, Alessandro Umbrico and Andrea Orlandini
44	<b>Toward human-like motion generation in the Cartesian domain with robotic manipulators</b> Marco Baracca, Paolo Bonifati, Ylenia Nisticò, Vincenzo Catrambone, Gaetano Valenza, Antonio Bicchi, Giuseppe Averta and Matteo Bianchi
47	<b>Exploiting robotics to assess the effects of fatigue on the human wrist joint</b> Giulia Aurora Albanese, Valeria Falzarano, Michael Wr Holmes, Pietro Morasso and Jacopo Zenzeri
54	<b>3D-AID : a new approach for customized upper-limb prosthesis and orthosis design</b> Fabrizio Taffoni, Nevio Luigi Tagliamonte, Francesca Cordella, Emanuele Gruppioni and Loredana Zollo
59	<b>Variable admittance control for hand exoskeletons in virtual reality-based rehabilitation tasks</b> Alberto Topini, William Sansom, Lorenzo Bartalucci, Nicola Secciani, Benedetto Allotta and Alessandro Ridolfi
63	<b>Robot-assisted Procedure for Pedicle Screw Fixation</b> Clemente Lauret, Francesca Cordella, Christian Tamantini, Cosimo Gentile, Francesco Scotto di Luzio and Loredana Zollo
64	<b>A Microscopic Human-Inspired Adaptive Cruise Control for Eco-Driving</b> Marco Mirabilio, Alessio Iovine, Elena De Santis, Maria Domenica Di Benedetto and Giordano Pola
70	<b>An Enactive Approach to Artificial Hand</b> Laura Corti
79	<b>HeAL9000: an Intelligent Rehabilitation Robot for Physical and Cognitive Interaction</b> Francesco Scotto di Luzio, Christian Tamantini, Francesca Cordella, Claudiu D. Hromei, Lorenzo Cristofori, Danilo Croce, Roberto Basili and Loredana Zollo
87	<b>Telepresence Robotics and AI-Based Services for Older Adults @Home Assistance</b> Gloria Beraldo, Riccardo De Benedictis, Rami Reddy Devaram, Amedeo Cesta and Gabriella Cortellessa
89	<b>Learn to drive a BMI based intelligent wheelchair</b> Luca Tonin, Gloria Beraldo, Stefano Tortora and Emanuele Menegatti



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## Posters Slot 2 – Friday, Oct 8 Afternoon

Paper No.	Paper Title & Authors
4	<b><i>Design of an Impact/Force Switching Controller</i></b> Loris Roveda, Daniele Riva, Giuseppe Bucca and Dario Piga
9	<b><i>Anytime informed path re-planning and optimization for human-robot collaboration</i></b> Cesare Tonola, Marco Faroni, Nicola Pedrocchi and Manuel Beschi
11	<b><i>Flexible robotic strategy for the assembly of ring-shaped elastic objects</i></b> Andrea Monguzzi, Marco Maiocchi, Andrea Maria Zanchettin and Paolo Rocco
15	<b><i>A Novel Framework for Multi-Agent Navigation in Human-Shared Environments</i></b> Manuel Boldrer, Daniele Fontanelli, Alessandro Antonucci and Luigi Palopoli
16	<b><i>Pushing with a group of mobile robots</i></b> Filippo Bertonecelli and Lorenzo Sabattini
20	<b><i>Real-time trajectory scaling algorithms for enhanced path following of robot manipulators</i></b> Marco Faroni, Manuel Beschi and Nicola Pedrocchi
25	<b><i>A Human-Centered Dynamic Task Planning Approach for Human-Robot Collaboration</i></b> Andrea Pupa and Cristian Secchi
28	<b><i>Underactuated Cable-Driven Parallel Robots: Exploiting and Controlling the Free Motion</i></b> Edoardo Idà and Marco Carricato
40	<b><i>Reactive collision avoidance for the teleoperation of a micro aerial vehicle</i></b> Raffaele Brilli, Maria Pozzi, Folco Giorgetti, Mario Luca Fravolini, Paolo Valigi, Domenico Prattichizzo and Gabriele Costante
55	<b><i>A ROS-based framework to boost the manipulation tasks programming and execution</i></b> Enrico Villagrossi, Nicola Pedrocchi, Marco Faroni, Michele Delledonne and Manuel Beschi
58	<b><i>On-line Optimal information-aware path planning with actuation noise and intermittent noisy measurements</i></b> Olga Napolitano, Daniele Fontanelli, Lucia Pallottino and Paolo Salaris
60	<b><i>Optimal Trajectory Planning with Safety Constraints</i></b> Alessandro Palleschi, Mazin Hamad, Saeed Abdolshah, Manolo Garabini, Sami Haddadin and Lucia Pallottino
65	<b><i>Whole-Body Balancing Control of Two-Wheeled Humanoids</i></b> Grazia Zambella, Gianluca Lentini, Manolo Garabini, Giorgio Grioli, Manuel G. Catalano, Alessandro Palleschi, Lucia Pallottino, Antonio Bicchi, Alessandro Settini and Danilo Caporale
66	<b><i>Trajectory Tracking for Articulated Soft Robots: an Iterative Learning Control Approach</i></b> Franco Angelini, Riccardo Mengacci, Michele Pierallini, Cosimo Della Santina, Manuel G. Catalano, Giorgio Grioli, Manolo Garabini and Antonio Bicchi
67	<b><i>Controllability For Underactuated Compliant Arms</i></b> Michele Pierallini, Franco Angelini and Manolo Garabini
73	<b><i>Identification of Robot Dynamics from Motor Currents/Torques with Unknown Signs</i></b> Marco Pennese, Claudio Gaz, Marco Capotondi, Valerio Modugno and Alessandro De Luca
75	<b><i>MPC-Based Gait Generation for Humanoids: from Walking to Running</i></b> Filippo Maria Smaldone, Nicola Scianca, Leonardo Lanari and Giuseppe Oriolo
80	<b><i>Motion Control of Redundant Robots with Generalised Inequality Constraints</i></b> Amirhossein Kazempour, Maram Khatib, Khaled Al Khudir and Alessandro De Luca
82	<b><i>Towards a Nonlinear Model Predictive Control for Quadrupedal Locomotion on Rough Terrain</i></b> Angelo Bratta, Niraj Rathod, Mario Zanon, Octavio Villarreal, Alberto Bemporad, Claudio Semini and Michele Focchi
93	<b><i>ChoiRbot: New Toolkits for Cooperative Robotics in the ROS 2 Framework</i></b> Andrea Testa, Andrea Camisa and Giuseppe Notarstefano



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## Posters Slot 3 – Saturday, Oct 9 Morning

Paper No.	Paper Title & Authors
3	<b>Grasping Learning for Service Robots</b> Luca Pozzi, Marta Gandolla, Filippo Pura, Marco Maccarini, Alessandra Pedrocchi, Francesco Braghin, Dario Piga and Loris Roveda
10	<b>A Multi-view Framework for Human Parsing in Human-Robot Collaboration scenarios</b> Matteo Terreran, Leonardo Barcellona, Daniele Evangelista, Emanuele Menegatti and Stefano Ghidoni
18	<b>Cloud Services for Autonomous Interaction With Social Robots and Artificial Agents</b> Lucrezia Grassi, Carmine Tommaso Recchiuto and Antonio Sgorbissa
21	<b>Reimagine BiSeNet for Real-Time Domain Adaptation in Semantic Segmentation</b> Antonio Tavera, Carlo Masone and Barbara Caputo
26	<b>Regressive Convolutional Neural Network for ARTVA detection</b> Bruno Strano and Lorenzo Marconi
38	<b>Towards Dynamic Human-Robot Role Allocation based on Human Ergonomics Assessment</b> Elena Merlo, Edoardo Lamon, Marta Lorenzini, Fabio Fusaro, Alessandro Carfi, Fulvio Mastrogiovanni and Arash Ajoudani
39	<b>Self Contact: Enhancing Virtual Reality Experience Recovering Kinaesthetic Feedback</b> Nicole D'Aurizio, Tommaso Lisini, Alberto Villani and Domenico Prattichizzo
49	<b>A Mixed Reality Architecture for Human-Robot Collaboration</b> Simone Macciò, Alessandro Carfi and Fulvio Mastrogiovanni
51	<b>A Framework for Trust-Based Task Assignment in Cooperative Teams of Robots</b> Alberto Grillo, Carmine Recchiuto, Stefano Carpin and Antonio Sgorbissa
52	<b>MEUS: a framework for Management of Emergencies through Ubiquitous Sensing.</b> Mario Ciranni, Lucrezia Grassi and Antonio Sgorbissa
56	<b>Recognizing Italian Gestures with Wearable Sensors</b> Matteo Dicensi, Linda Lastrico, Alessandro Carfi, Alessandra Sciutti, Fulvio Mastrogiovanni and Francesco Rea
57	<b>An Augmented Reality System for Human Operators in Search and Rescue Missions</b> Mykhailo Dmytrenko, Carmine Recchiuto and Antonio Sgorbissa
61	<b>Vision based robot-to-robot object handover</b> Monica Sileo, Michelangelo Nigro, Domenico Bloisi, Francesco Pierri and Fabrizio Caccavale
76	<b>A Robot Platform for Hyperspectral Imaging Applications in Smart Viticulture</b> Riccardo Bertoglio, Matteo Matteucci, Paolo Guadagna and Matteo Gatti
77	<b>Towards a fully automated procedure for crack detection in civil structures</b> Erika Pellegrino and Tania Stathaki
78	<b>Toward enabling iCub to detect lies in everyday life</b> Dario Pasquali, Francesco Rea and Alessandra Sciutti
83	<b>A pilot study towards the implementation of perceptual and motor adaptation in robots</b> Matilde Antonj, Joshua Zonca, Linda Lastrico, Maura Casadio and Alessandra Sciutti
84	<b>A Generative Model Towards Conditioned Robotic Object Manipulation</b> Luca Garelo, Linda Lastrico, Fulvio Mastrogiovanni, Alessandra Sciutti, Nicoletta Noceti and Francesco Rea
85	<b>Deep learning-based localization of the biliary tract in laparoscopic images acquired during surgical robotic procedures</b> Cristina Iacono, Sara Moccia, Aldo Marzullo, Elena De Momi, Umberto Bracale and Fanny Ficuciello
86	<b>Abstraction: A Framework for Knowledge Transfer Between Domains</b> Antonio Loquercio and Davide Scaramuzza



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## Posters Slot 4 – Saturday, Oct 9 Afternoon

Paper No.	Paper Title & Authors
5	<b>Surface-aware Ultra Violet disinfection through a mobile manipulator</b> Andrea Borgese, Giorgio Grassi, Dario Calogero Guastella, Giuseppe Sutera and Giovanni Muscato
6	<b>A Drone-Assisted 3D Printing by Crane Structures in Construction Industry</b> Fabio Parisi, Agostino Marcello Mangini, Maria Pia Fanti and Nicola Parisi
7	<b>Paquitop.arm: a camera-based mobile manipulator for indoor assistance</b> Luigi Tagliavini, Andrea Botta, Giovanni Colucci, Paride Cavallone, Luca Carbonari and Giuseppe Quaglia
14	<b>Robotic Wires Manipulation for Switchgear Cabling and Wiring Harness Manufacturing</b> Kevin Galassi and Gianluca Palli
27	<b>The Italian project SUONO: preliminary results on underwater manipulation tasks</b> Edoardo Topini, Alessandro Bucci, Jonathan Gelli, Alberto Topini, Alessandro Ridolfi and Benedetto Allotta
32	<b>The PRISMA Hand II: A Sensorized Robust Hand for Adaptive Grasp and In-Hand Manipulation</b> Avinash Kumar Singh, Rocco Moccia and Fanny Ficuciello
33	<b>Hybrid Self-Reconfigurable Platform for Inspection: The Crawler Unit</b> Sergio Leggieri, Carlo Canali, Roberto Gagliardi, Ferdinando Cannella and Darwin Caldwell
35	<b>Plant-inspired Remote Controllable Snap-Fastener for Robotic Micromanipulation</b> Isabella Fiorello, Fabian Meder and Barbara Mazzolai
37	<b>Kinematic Intrinsic Null-Space Motor Control for Human Bodily Augmentation</b> Tommaso Lisini Baldi, Nicole D'Aurizio and Domenico Prattichizzo
41	<b>Extensions of POMCP Planning and Applications to Robotic and Cyber-physical Systems</b> Alberto Castellini, Enrico Marchesini, Giulio Mazzi, Federico Bianchi, Maddalena Zuccotto and Alessandro Farinelli
45	<b>Design of a wearable haptic device for hand palm cutaneous feedback</b> Mihai Dragusanu, Alberto Villani, Domenico Prattichizzo and Monica Malvezzi
46	<b>BRILLO: Investigating the Complex Role of a Robot in the Service Industry</b> Alessandra Rossi and Silvia Rossi
53	<b>Human-robot cooperative grasping of large objects</b> Sara Marullo, Maria Pozzi, Domenico Prattichizzo and Monica Malvezzi
62	<b>An Integrated Robotic Depalletizing System for Supermarkets' Backrooms</b> Pierluigi Arpentì, Riccardo Caccavale, Giuseppe Andrea Fontanelli, Vincenzo Lippiello, Gianmarco Paduano, Bruno Siciliano and Luigi Villani
68	<b>Towards Robotic Environmental Monitoring</b> Franco Angelini, Riccardo Mengacci and Manolo Garabini
69	<b>Improved tracking and docking of Industrial Mobile Robots through UKF vision based kinematics calibration</b> Stefano Mutti, Nicola Pedrocchi, Vito Renò and Massimiliano Nitti
81	<b>Virtual Prototyping of a Compliant Robotic Wrist</b> Mario Baggetta, Giovanni Berselli, Gianluca Palli and Claudio Melchiorri
88	<b>Local Planners with Deep Reinforcement Learning for Indoor Autonomous Navigation</b> Mauro Martini, Vittorio Mazzia, Simone Angarano, Dario Gandini and Marcello Chiaberge
90	<b>First Field Tests of a Legged Robot in a Vineyard</b> Claudio Semini, Angelo Bratta, Michele Focchi, Matteo Gatti, Stefano Poni and Victor Barasuol