

2026 Brazilian Conference on Robotics (CROS 2026)

**João Pessoa, Brazil
27-30 April 2026**

IEEE Catalog Number:
ISBN:

CFP260M1-POD
979-8-3195-1716-6



Copyright © 2026, IEEE

All Rights Reserved

Copyright and Reprint Permissions:

Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

*** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.

IEEE Catalog Number:	CFP260M1-POD
ISBN (Print-On-Demand):	979-8-3195-1716-6
ISBN (Online):	979-8-3195-1715-9

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA

Phone:	(845) 758-0400
Fax:	(845) 758-2633
E-mail:	curran@proceedings.com
Web:	www.proceedings.com

TABLE OF CONTENTS

Communication Backbone Deployment with Connectivity Maintenance	1
<i>Leonardo H. M. C. Dos Santos, Caio C. G. Ribeiro, Douglas G. Macharet</i>	
A Conceptual and Computational Model of Drone Swarms Using Flocking Dynamics	7
<i>Marlon M. López-Flores, Fabio Suim Chagas, Paulo Fernando Ferreira Rosa</i>	
Development of a digital twin for monitoring the autonomy of intelligent and connected electric vehicles	13
<i>Mateus Lourenço Do Carmo, Danilo Alves de Lima, Felipe Oliveira e Silva</i>	
Adaptive Swarm Navigation: Dynamic Switching Between Behaviors for Congestion Avoidance in Cluttered Environments	19
<i>Laisson Bruno R. Germano, Héctor Azpúrua, Douglas G. Macharet</i>	
An Agentic Framework for Aerial Swarms: Integrating LLMs with the Crazyswarm2	25
<i>Victor B. S. Fernandes, Arthur C. Vangasse, Luciano C. A. Pimenta, Gustavo M. Freitas</i>	
Multi-agent Perimeter Defense of Spatially Distributed Regions	31
<i>Leonardo R. D. Paes, Cleiton N. Santos, Douglas G. Macharet</i>	
Temporal Jitter Evaluation for Real-Time Vision Applications	37
<i>Vitor Amadeu Souza, Hebert Azevedo Sá, Paulo Fernando Ferreira Rosa</i>	
UPI-Dataset: A Balanced UAV-Based Image Dataset for Defect and Anomaly Detection in Power Distribution Systems	43
<i>Gabriel B. Leandro, Arthur A. Da Costa, Carlos A. F. Persiani, Gabriel S. Gama, Roberto S. Inoue Valdir Grassi, Marco H. Terra, Mário Oleskovicz</i>	
UAV Visual Servoing for Electrical Distribution System Inspection	49
<i>Arthur A. Costa, Lucas B. Mello, Eduardo G. Ribeiro, Carlos A. F. Persiani, Roberto S. Inoue Valdir Grassi, Marco H. Terra, Mário Oleskovicz</i>	
Exploiting domain knowledge for content-agnostic template matching in structured environments	55
<i>Rômulo T. Rodrigues, Marcelo Souza, Davidson Robert Moura, Jerry Varella, Iury Bessa, Kenny Vinente</i>	
Generative-Augmented Maritime Navigation Dataset: A Deep Synthetic Data Generation Framework	61
<i>Lidia G. D. Meneses Santos, Igor Matias de Lima Dantas, Arthur Andrade Bezerra, Ilyes Benaissa Emerson Vilar de Oliveira, Cosimo Distante, Esteban W. G. Clua, Luiz Marcos Garcia Gonçalves</i>	
Multi-Variable Expanded Latent Space Autoencoder for Underwater Image Classification	67
<i>Igor Matias de Lima Dantas, Lidia G. D. de Meneses Santos, Arthur Andrade Bezerra Emerson Vilar de Oliveira, Joris Guerin, Esteban W. G. Clua, Luiz Marcos Garcia Gonçalves</i>	
Validation of Robotic Arm Gestures for Social Robots Based on Human Perception	73
<i>Raul Benites Paradedda, Mateus Da Costa Furtado, Anderson Abner De Santana Souza</i>	
Reward Shaping for Learning the Pre-Skimming Reach Phase with a Robotic Manipulator	79
<i>Thiago Lages Rocha, Héctor Azpúrua, Douglas G. Macharet</i>	
Design of a Robotic Gripper with Magnetically Coupled Modular Fingers	85
<i>João Pedro da Silva Cardoso, Leonardo Mejia Rincon, Daniel Victor Krepsky</i>	

Constrained Task-Space Control of a UR5 Manipulator Using CBF–QP	91
<i>Cayo Fábio Sousa, Vinicius Mariano Gonçalves, Armando Alves Neto</i>	
Foundations of Vision Language Action Models for Generalist Robotic Manipulation	97
<i>Gabriel A. Dorneles, Kristofer S. Kappel, Rodrigo S. Guerra, Paulo L. J. Drews-Jr</i>	
Dynamic Coalition Formation for Probabilistic Perimeter Defense with Homogeneous Defenders	103
<i>Cleiton N. Santos, Douglas G. Macharet</i>	
Graph Connectivity Maintenance for Multi-Robots Systems under Visual Occlusion Constraints via CBFs	109
<i>Victor Sá, Arthur Vangasse, Douglas G. Macharet, Luciano Pimenta, Vinicius Gonçalves, Gustavo Freitas</i>	
LiDAR-Based Intruder Identification and Prevention in Leader–Follower Formations	115
<i>Leonardo A. Fagundes-Junior, Alexandre S. Brandão</i>	
Deep Learning-Based Estimation of Slip and Skidding for Wheeled Robots	121
<i>Enio Moreira Silva Júnior, Gilmar Pereira Da Cruz Júnior, Gustavo M. Freitas</i>	
Software Development for Function Generation Synthesis of Six-Bar Mechanisms via Optimization	127
<i>Daniel Victor Krepsky, Leonardo Mejia Rincon, João Pedro Da Silva Cardoso</i>	
From Simulation to Hardware: Development of a Modular Underactuated Biped Robot	133
<i>Henrique Barros Simões, Pedro Parik-Americano, Ivan Fischman Ekman Simões, Pedro Yasuda Norka Lazarte, Arturo Forner-Cordero</i>	
Modeling and Control of Wind Disturbances in a Hybrid Unmanned Aerial-Underwater Vehicle	139
<i>Vítor S. Bosenbecker, Stephanie L. Brião, Pedro M. Pinheiro, Mauro A. B. Cunha, Gabriel B. Luche Paulo L. J. Drews</i>	
A Review of Proportional Navigation Guidance Laws: Formulations, Variants, and Implementation Considerations	145
<i>Nelson Ciancaglio Netto, Carlos Roberto Bearzi, Marco Antonio Rocha Ribeiro Filho Symone Gomes Soares Alcalá, Anselmo Rafael Cukla</i>	
Proprioceptive ContactNet: Towards Bridging the Sim-to-Real Gap in Quadrupedal Contact Estimation	151
<i>Masa Thema, Vivian Suzano Medeiros, Letícia I. Shimizu, Juliano Decico Negri, Marcelo Becker</i>	
Next-Best-View using Deep Reinforcement Learning with Quadruped Robots in Simulation	157
<i>Lucas Toschi, Matheus Aparecido do Carmo Alves, Thiago Boaventura</i>	
Learning Perception-based Quadrupedal Locomotion on Highly Inclined Industrial Staircases	163
<i>Letícia I. Shimizu, Matheus Aparecido Do Carmo Alves, Juliano Decico Negri, Gabriel Bermudez Marcelo Becker</i>	
Deep Reinforcement Learning for Quadruped Locomotion in Genesis: A Comparative Study of PPO, SAC, and TD3 in Irregular Terrains	169
<i>Bruno Lemos, Rodrigo Silva, Guilherme Maia, Luiz Chaimowicz</i>	
Control and Simulation of a Line-Follower Robot	175
<i>Jourdan Henrique Martins Pereira, Rogério Rodrigues Lima, Gustavo Medeiros Freitas</i>	
Gain-Scheduled Control for Trajectory Tracking of a Two-Wheeled Balancing Mobile Robot	181
<i>Gustavo Corrêa de Oliveira, Vivian Suzano Medeiros, Marcelo Becker</i>	

Improving Indoor Mobile Robot Localization Using Integrated EKF-SLAM, AMCL and ArUco Fiducial Markers	187
<i>Fernanda M. Luna, Kenny A. Q. Caldas, Leandro J. E. Campos, Kelen C. Teixeira Vivaldini Tatiana F. P. A. T. Pazelli, Roberto S. Inoue</i>	
Context-Aware Semantic Navigation: A Fuzzy Logic Costmap Fusion Approach for ROS2	193
<i>Tiago de Rezende Alves, Luiz Chaimowicz</i>	
Transformer-based Decision-Making using Segmented Bird's Eye View Images and Deep Reinforcement Learning	199
<i>Ana Huamán Reyna, Iago Pachêco Gomes, Vinicius Gustierrez Neves, Denis Fernando Wolf</i>	
A Vector Field-Based Path-Following Approach for Ackermann-Steered Vehicles	205
<i>Leandro H. V. Sousa, Christyan H. Ribeiro, Luciano C. A. Pimenta, Elias J. R. Freitas</i>	
Image-Based Gimbal Control for Object Tracking	211
<i>Lucas Ávila Silva, Marcos R. O. A. Máximo, Raphael Das Neves Calvo</i>	
Super-BoW Algorithm for Place Recognition in Indoor Environments	216
<i>Kesse Jonatas de Jesus, Lucas Marchesan Silva, Gustavo Arthur Dutra, Daniel Fernando Tello Gamarra Anselmo Rafael Cukla, Thássio Gomes Silva, Felipe Oliveira Silva, Rodrigo Silva Guerra Paulo Lilles Jorge Drews-Jr, Lucas Benedetti Viana Cordova</i>	
Real-Time YOLO-Based Embedded System for Automated Breast Cancer Detection in Mammography	222
<i>E. C. Souto, C. A. Peña Fernández</i>	
Pose estimation with ArUco markers and Kalman filter with on-line covariance adjustments for cooperative robotics	228
<i>Gabriel Tambara Rabelo, Marcos Eduardo Monteiro Junqueira, Geovany Araujo Borges</i>	
An Attentive Multi-Scale Approach for Semantic Segmentation	233
<i>Vinicius Gustierrez Neves, Iago Pachêco Gomes, Ana Huamán Reyna, Wellington Matos Amaral Denis Fernando Wolf</i>	
Closed-loop grasp verification via structured multi-sensor reasoning under occlusion	239
<i>Marina B. Oliveira, Sabrina A. Cardoso, Felipe H.N. Nascimento, Antonio M. N. Lima, Danilo F.S. Santos</i>	
Learning2Learning: An Educational Open Source App for Data Visualization in Robotics Navigation	245
<i>Leonardo A. Fagundes-Junior, Iure R. L. de Oliveira, Alexandre S. Brandão</i>	
A Lightweight Open-Source Python-Based Simulator as an Educational Tool for Buoyancy Controlled Underwater Robotics	251
<i>Danilo S. Oliveira, Luiz Eduardo A. de Oliveira, Vinicius C. F. Dos Santos, Benício B. Cruz Stephanie Kamarry A. de Sousa</i>	
Development of an Educational Robotics Kit Without the Use of Screens	257
<i>Anna Giselly Fraga Martins, Luiz Eduardo Andrade de Oliveira, Leonardo Aprigio Nascimento Fontes Jonathan Venceslau Souza, Maria Carolina Aragão de Andrade, Benicio Barbosa Cruz</i>	
Unplugged Computing and Educational Robotics in Early Childhood Education: Outreach Experiences with Playful and Sustainable Practices	262
<i>Claudia Juliette Do N. Araujo Maia, Roniedson Fernandes Da Silva Pequeno, Leonardo R. de L. Teixeira Ana Emanuele Vieira Lima, Elizangela Da Silva Dias de Souza, Mabele De Jesus Santos Luciane Terra Dos Santos Garcia, Luiz Marcos Garcia Gonçalves</i>	

An Active Learning Methodology for Teaching the Kalman Filter in Robotics Applications	268
<i>Modesto Valci Moreira Lopes, Thiago Martins, Arturo Forner-Cordero, Eduardo Lobo Lustosa Cabral Izabel Fernanda Machado, Larissa Driemeier</i>	
Static Stability and Low-Level Actuation Control of a Wheel-Legged Agricultural Robot	274
<i>Hugo Rafacho Fernandes, Edna Carolina Moriones Polanía, Artur Vitório Andrade Santos Flávio Roberto de Freitas Gonçalves, Daniel Albiero, Angel Pontin Garcia</i>	
Challenges on Operational Procedures and Practical Experiences on Data Collection with Autonomous Sailboats	280
<i>André Ferreira, Diego Nunes Brandão, Raphael Guerra, Adriano Werneck, Luan Freitas Eduardo Charles Vasconcellos, Luiz Marcos Garcia Gonçalves, Esteban Walter Gonzalez Clua</i>	
Wi-Fi HaLow-Enabled Offboard Person Detection for UAV Search and Rescue	286
<i>Thiago Almeida, Isaac Reyes, Paulo Rezeck, Hector Azpurua</i>	
Robotic Safe and Efficient Measurement of Jaw Crusher Open Side Setting	292
<i>Alicia Montalvão, Mário Torres, Yuri Besspaloff, André Cid, Gustavo Medeiros Freitas</i>	
An Automated and Compact Fiber Optic Tether System for Mobile Robots in Confined Spaces	298
<i>Maurício F. S. Corrêa, Danilo Pimentel, André Cid, Gustavo Freitas, Luiz Chaimowicz, Héctor Azpúrua</i>	
OTA Updates for Intelligent Vehicles: Challenges for a Safe and Secure Strategy	304
<i>Henrique Cordeiro Pereira, Petrônio Gomes Lopes</i>	
Development of an Expressive Self-Balancing Companion Robot	310
<i>Luis Augusto Ccopa Ibarra, Caio Puertas Popolin Garcia, Priscila Cunha Vazquez Nityananda Vianna Saraswati, Danilo Hernani Perico</i>	
Distance-Optimized Waypoint Sequencing for UAV Environmental Monitoring	316
<i>Kassia R. Oliveira, Lucas M. A. Dias, Willy G. Balieiro, Anselmo R. Cukla, Daniel F. T. Gamarra Paulo L. J. Drews, Alternei S. Brito, Vandermi J. Silva, José L. S. Pio, Felipe G. Oliveira</i>	
LiDAR-Based Box Dimensioning in a Multi-Robot Logistics Scenario	322
<i>Luciano G. Moreira, Geissiane A. de Aguiar, José Leandro C. Mirante, Alexandre S. Brandão</i>	
Mapping and Localization in Confined Underwater Environments: A Review and Research Agenda	328
<i>Eduardo M. Fontelles, Flávio Romero S. de Sá Muniz, Lisa Matubara, Victor Guilherme A. Costa Rafael R. F. Melo, Fernando F. de Carvalho, Diego N. Brandão</i>	
A Low-Cost Remotely Operated Underwater Vehicle for Educational Applications	334
<i>José Breno K. B. Fontes, João Pedro S. S. Santos, Leonardo Aprigio N. Fontes, Lázaro A. de A. Menezes Stephanie Kamarry A. de Sousa, Phillipe C. Santos</i>	
Underwater Localization in Low-Texture Environments: Review, State of the Art and Perspectives	340
<i>Lisa Matubara, Flávio Romero S. de Sá Muniz, Eduardo M. Fontelles, Victor Guilherme A. Costa Rafael R. F. Melo, Fernando F. de Carvalho, Diego N. Brandão</i>	
Transformer Models for Underwater 3D Reconstruction: Advances, Challenges and Trends	346
<i>Victor Guilherme A. Costa, Lisa Matubara, Eduardo M. Fontelles, Flávio Romero S. de Sá Muniz Rafael Rodiani F. Melo, Fernando F. de Carvalho, Diego N. Brandão</i>	
Cross domain Persistent Monitoring for Hybrid Aerial Underwater Vehicles	352
<i>Ricardo B. Grando, Victor A. Kich, Alisson H. Kolling, Junior C. D. Jesus, Rodrigo S. Guerra Paulo L. J. Drews</i>	

UAV Path-Planning for Autonomous Power-Line Inspection Missions	358
<i>Leonardo A. Fagundes, Alexandre S. Brandão</i>	
Performance Analysis of the IMM-EKF Estimator for Trajectory Prediction of the Hermes 900 UAV	364
<i>Carlos Roberto Bearzi, Nelson Ciancaglio Netto, Victor Rodrigues Manrique, Anselmo Rafael Cukla</i>	
Dispersive Polarized RRT (DP-RRT): A Novel Biased Sampling Strategy for Enhanced RRT	
Performance	370
<i>Gil Gleitson Santos Evangelista de Castro, Elyson Ádan Nunes Carvalho, Lucas Molina</i>	
<i>Eduardo Oliveira Freire, José Gilmar Nunes de Carvalho Filho, Stephanie Kamarry Alves de Sousa</i>	
Path Planning in Dynamic Environments: A Comparison of Algorithms in the RoboCup SSL*	376
<i>Gabriel Souza Barbosa, Kelen C. Teixeira Vivaldini, Tatiana F. P. A. Taveira Pazelli</i>	
Influence of Mutation Operators in a Differential Evolution-based Path Planning for Non-Holonomic	
Robots	382
<i>Elias J. R. Freitas, Pedro L. da Silva, Gustavo H. A. Cruz, Leandro H. V. Sousa, Luciano C. A. Pimenta</i>	
A Comparative Benchmark of Path Planning Algorithms in Dynamic Environments	388
<i>Hasan Ali Asghar, Felipe Delduque Guerche, Kelen C. Teixeira Vivaldini, Roberto Santos Inoue</i>	
Embodied GPT-5.1: Evidence of a World Model?	394
<i>Roberto Spinelli, Thiago C. Martins</i>	
Use of Artificial Intelligence Techniques for Visual Localization Based on an Omnidirectional	
Catadioptric Camera	400
<i>Emily Caroline dos Santos Costa, Larissa Driemeier, Eduardo Lobo Lustosa Cabral</i>	
A Tiny Recursive Multi-Head Model for Semantic Traffic Sign Recognition in Autonomous Robotics	406
<i>Matheus Lima Castro, Cesar A. M. da Silva, Davi de Oliveira Costa, Lucas V. Souza, Felix M. Escalante</i>	
<i>Leopoldo Lusquino Filho</i>	
A WebRTC-Based Architecture for Remote Monitoring of Mobile Robots	412
<i>Gabriel Víctor M. Muniz, Michel Melo da Silva, Alexandre Santos Brandão</i>	
Semantic Amodal Segmentation Methods in Autonomous Vehicles Environments: A Review	418
<i>Eduardo L. Silva, Stephanie L. Brião, Tatiana T. Schein, José D. G. Ramos, Felipe G. Oliveira</i>	
<i>Paulo L. J. Drews-Jr</i>	
Combining Entropy Metrics and Autoencoder–LSTM Models for Lightweight Data Injection Detection	
in ROS 2	424
<i>Jorge N. Gutiérrez, Bruno L. Dalmazo, Paulo L. J. Drews-Jr</i>	
Miniaturized Mobile Robot for Educational Applications in Logistics	430
<i>César Grossl, Dieisson Martinelli, Vivian Cremer Kalempa, André Schneider de Oliveira</i>	
Unplugged Computing as an Introductory Strategy for Teaching Block-Based Programming Using the	
NAO Humanoid Robot	436
<i>Raul Benites Paradedda, Jean Marota da Silva, Evelyn Maria da Conceição, Guilherme de Sousa Lacerda</i>	
<i>Guilherme De Holanda Soares, Luiziane Paulino dos Santos</i>	
A 5R Robotic Master Arm Proposal for Remote Control of the KUKA KR3 R540 Industrial Robot	442
<i>Lucca Sardá Tonin Matos, Lucas Bollmann Baum, Marianne Gaertner, Leonardo Mejia Rincon</i>	
<i>Ebrahim Samer El Youssef</i>	

Development of a Robotic System for the Introduction of Space Robotics Concepts in Basic Education	448
<i>Lucas Pereira Lima, Ryan Lucas Soares Laranjeira, Cecilia Helena Gurgel de Andrade</i>	
<i>Maria Gabriella Monteiro Alves, Fabio Augusto Procopio de Paiva, Credson Isaac Lopes dos Santos</i>	
<i>Givanaldo Rocha de Souza, Filipe Campos de Alcântara Lins</i>	
Development of an Integrated Software System for an Othello-Playing Collaborative Robot	454
<i>Ícaro Moro Sicchieri, Felipe G. de M. D'Elia, Larissa Driemeier, Thiago C. Martins</i>	
Lightweight Semantic Segmentation for Feature-based Visual Odometry in Dynamic Environments	460
<i>Thulio Amorim, Tiago Nascimento</i>	
Systematic Review on Sensor Fusion Techniques for Mobile Robots Using LiDAR and Complementary Sensors	465
<i>Flávio Romero S. de Sá Muniz, Lisa Matubara, Eduardo M. Fontelles, Victor G. A. Costa</i>	
<i>Rafael Rodiani F. Melo, Fernando F. de Carvalho, Diego N. Brandão</i>	
Impact of Windowing on LiDAR Odometry	471
<i>Antonio C. de A. Júnior, José Cândido S. S. Filho, Leonardo Gurgel C. P. Filho</i>	
An Integrated System for Fast Mapping and Autonomous Navigation of Mobile Robots using ROS	477
<i>Thiago Araujo Campos, Levir D. Cardoso de Oliveira, Gabriel Bertho, Kelen C. Teixeira Vivaldini</i>	
Anomaly Detection in ROS 2 Networks: A Hybrid Approach of Feature Selection and Feature Learning in Robotic Perception	483
<i>Jornão Gaspar, Jorge N. Gutiérrez, Paulo L. J. Drews, Bruno L. Dalmazo</i>	
Task-Space Trajectory Planning for Redundant Robotic Systems in Wire Arc Additive Manufacturing*	489
<i>Raphael P. Figueiredo da Silva, Fernando Lizarralde</i>	
Integration of Local Generative Language Models in Humanoid Robots: An Approach with the NAO Robot and DeepSeek-LLM	495
<i>Vitor Amadeu Souza</i>	
A New Approach for Action Recognition used in Proximal Control of UAVs	501
<i>Lygia Águeda Bezerra, Ewerton de Oliveira, Tiago Nascimento</i>	
Development of a Modular Framework for Multimodal Interaction with the NAO Humanoid Robot Using Computer Vision and Natural Language Processing	507
<i>Vitor Amadeu Souza</i>	
LIBRAS Alphabet Recognition System Based on Landmarks and Artificial Neural Networks	513
<i>Caio Alves Da Cruz Andrade, José Alberto Diaz Amado, Crescencio Lima, Cleia Libarino</i>	
<i>João Erivandro Marques, Raphaell Maciel de Sousa, Luis A. Correia Filho, Fabricia Astrid</i>	
<i>Kenedy Marconi</i>	
Eliciting Intuitive Gestures in Drones via Controlled Frustration: A Multidisciplinary Study	519
<i>Carlos Alberto Santana Dos Santos, João Pedro Santana Silva Santos, Stephanie Kamarry Alves de Sousa</i>	
<i>Phillipe Cardoso Santos, Eduardo Oliveira Freire, Sidney Nascimento Givigi</i>	
Multi-Time Scale Control Allocation: A DCSV-Krylov Approach for Multicopters	525
<i>C. A. Peña Fernández, Hangxu Li</i>	
Vision-Based UAV Tracking for UAV-UGV Cooperation Using YOLOv11 and Kalman Filtering	531
<i>Lucas L. M. Carvalho, Milena F. Pinto, Yuri N. Silva, Thiago M. Tuxi</i>	

ASV Aerocat: Cooperative Aerial–Surface System for Inspection Tasks	537
<i>João Marcelo R. Silva, Vitor Eduardo F. Oliveira, Vinícius B. Schettino, Accacio F. Dos Santos Neto</i>	
Seed Dispenser for Reforestation with Drones	543
<i>Livia Alkimim Dos Santos, Jeovana Miranda Souza, Rubens Ian Silveira Dos Santos</i> <i>Ana Júlia Da Silva Almeida, Leandro Gonçalves Dos Santos, Reinaldo Monteiro Cotrim, Fábio Santos Lima</i> <i>Sarah Victoria Soares Farias, Luiz Flávio Rodrigues Silva</i>	
Propulsion of Hybrid Aerial-Underwater Vehicles: Experimental Setup and Dataset	549
<i>Jardel J. P. Prado, Pedro M. Pinheiro, Adir A. P. Junior, Emanuel S. D. Estrada, Paulo L. J. Drews-Jr</i>	
On the Challenges of Amphibious Uncrewed Surface Vehicle Simulation	555
<i>Alysson M. S. Barbosa, Gabriel L. Sá Júnior, Tiago P. Nascimento, Davi H. Santos</i>	
Synthetic Data Set for Surgical Instrument Detection	561
<i>N. R. Coelho, J. E. D. Leite, M. R. Da Silva, A. Durand-Petiteville</i>	
Development of a prototype of a medicine blister cutter	567
<i>L. L. De Siqueira, I. L. Santos, M. R. Da Silva, A. Durand-Petiteville</i>	
Relative Localization of a Robotic Smart Walker Based on Signal Fusion Using an Extended Information Filter	573
<i>Alberto T. Oliveira, Pablo J. Alsina, Tania L. Laura, Bruno M. F. Silva, Adelardo A. D. De Medeiros</i> <i>Marcio V. Araújo</i>	
A Finite-Element-Based Framework for Simulating Human-Exoskeleton Interface Mechanics	579
<i>Leonardo Monteiro Mazzariol, André Assumpção Siciliano, Rafael Traldi Moura, Arturo Forner-Cordero</i>	
A Human–Exoskeleton Co–Learning Framework for Adaptive and Synergistic Interaction in Rehabilitation Settings	585
<i>Nasiru Adamu Marafa, Melkzedekue M. A. C. Moreira, Adriano Siqueira</i>	
IMU based displacement and impact estimation for the analysis of human-exoskeleton interactions	591
<i>Adriano Arouck De Araújo, Leonardo Monteiro Mazzariol, Pedro Parik Americano, Victor Bartholomeu</i> <i>Rafael Francisco Vieira De Melo, Daniela Mitiyo Odagiri Utiyama, André Tadeu Sugawara</i> <i>Linamara Rizzo Battistella, Arturo Forner-Cordero</i>	
Multi-Zone Velocity Control for Quadrupedal Gait Monitoring and Assistance in Rehabilitation	597
<i>Rafael R. Baptista, Thiago Boaventura, Gustavo J. G. Lahr</i>	
Adaptive Proxemic Path Planning for Mobile Robots in Dynamic Human Environments with Predicted Motion	603
<i>Raphaell Maciel De Sousa, Jose Diaz-Amado, Pablo V. A. Barros, Leandro Honorato De Souza Silva</i> <i>José Paulo Gonçalves De Oliveira</i>	
Bridging TurboWarp and NAO: API Architecture for Block-Based Humanoid Robot Programming	609
<i>Luiziane Paulino dos Santos, Evelyn Maria R. da Conceição, Guilherme de Sousa Lacerda</i> <i>Raul Benites Paradedá</i>	
Mimoso: A Humanoid Platform for Research in Locomotion and Deep Reinforcement Learning	615
<i>Murilo C. Bicho, Vinícius Menezes de Oliveira</i>	
Real-Time Immersive Robotic Teleoperation Framework Using Virtual Reality and ROS	621
<i>Miguel Pereira Santos Neto, Andre G S Conceicao, António Paulo Moreira</i>	

A Django-Based Web Framework for Teleoperation of Differential Robots Integrated with ROS2	627
<i>Artur Vitório Andrade Santos, Edna Carolina Moriones Polanía, Hugo Rafacho Fernandes</i>	
<i>Flávio Roberto de Freitas Gonçalves, Clayton Jose Torres, Angel Pontin Garcia, Daniel Albiero</i>	