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Autore	Buche Cédric
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Altri autori (Persone)	RossiAlessandra SimõesMarco VisserUbbo
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Nota di contenuto	Play Everywhere: A Temporal Logic based Game Environment -- Independent Approach for Playing Soccer with Robots -- Neural Network and Prior Knowledge Ensemble for Whistle Recognition -- RoboNLU: Advancing Command Understanding with a Novel Lightweight BERT-based Approach for Service Robotics -- 3D Multimodal Socially Interactive Robot with ChatGPT Active Listening -- Human Presence Probability Map (HPP): a Probability propagation based on Human Flow Grid -- Neural Network-based Joint Angle Prediction for the NAO Robot -- Multi-Robot Path Planning with Safety Based Control applied to the Small Size League Robots -- Improving Inertial Odometry through Particle Swarm Optimization in the RoboCup Small Size League -- Hybrid Inverse Kinematics for a 7-DOF Manipulator

Handling Joint Limits and Workspace Constraints -- Calibration of Inverse Perspective Mapping for a Humanoid Robot -- Using Neural Factorization of Shape and Reflectance for Ball Detection -- Hybrid Methods for Real-time Video Sequence Identification of Human Soccer Referee Signals -- Temporal Planning and Acting in Dynamic Domains -- SUSTAINA-OP: Kid-sized Open Hardware Platform Humanoid Robot -- An Opponent Formation Classifier for Simulated Robot Soccer -- Swing foot pose control disturbance overcoming algorithm based on reference ZMP preview controller for improving humanoid walking stability -- Structural Pruning for Real-Time Multi-Object Detection on NAO Robots -- Dynamic Joint Control for A Humanoid Walk -- RL-X: A Deep Reinforcement Learning Library (not only) for RoboCup -- Orienting a humanoid robot in a soccer field based on the background -- Autonomous Waiter Robot System for Recognizing Customers, Taking Orders, and Serving Food -- Anthropomorphic Human-Robot Interaction Framework: Attention Based Approach -- Crossing Real and Virtual : Pepper Robot as an Interactive Digital Twin -- Improving Applicability of Planning in the RoboCup Logistics League using Macro-actions Refinement -- In Defense of Scene Graph Generation for Human-Robot Open-Ended Interaction in Service Robotics -- RoboCup In SSL-Unification: a Modular Software Architecture for Dynamic Multi-Robot Systems -- Rhoban Football Club: RoboCup Humanoid Kid-Size 2023 Champion Team Paper -- RoboCup 2023 Humanoid AdultSize Winner NimbRo: NimbRoNet3 Visual Perception and Responsive Gait with Waveform In-walk Kicks -- b-it-bots: Winners of RoboCup@Work 2023 -- Robust Integration of Planning, Execution, Recovery and Testing to Win the RoboCup Logistics League -- RoboCup@Home SSPL Champion 2023: RoboBreizh, a fully embedded Approach -- HELIOS2023: RoboCup 2023 Soccer Simulation 2D competition Champion -- B-Human 2023 - Object and Gesture Detection -- RoboCup 2023 SSL Champion TIGERs Mannheim - Improved Ball Interception Trajectories -- FC Portugal: RoboCup 2023 3D Simulation League Champions -- Tech United Eindhoven Middle Size League Winner 2023.

Sommario/riassunto

This book constitutes the proceedings of the 26th RoboCup International Symposium which was held in Bordeaux, France, during July 4-10, 2023. The 25 regular papers included in these proceedings were carefully reviewed and selected from 47 submissions; the volume also includes 11 RoboCup Champions Papers. In addition to presenting the proceedings of the RoboCup 2023 Symposium, the book highlights the approaches of champion teams from the competitions. Due to the complex research challenges set by the RoboCup initiative, the RoboCup International Symposium offers a unique perspective for exploring scientific and engineering principles underlying advanced robotic and AI systems.
